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Applicant : Anderson et al. ) Group Art Unit: Unknown  
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20231, on  
May 4, 2001  
(Date)  
Ginger R. Dreger, Reg. No. 33,055

SEQUENCE SUBMISSION STATEMENT

Assistant Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

A copy of the Sequence Listing in computer readable form as required by 37 C.F.R. §1.821(e) is submitted herewith.

As required by 37 C.F.R. §1.82(e), the data on the enclosed disk is identical to the Sequence Listing in the application filed herewith.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: May 4, 2001

By: Ginger R. Dreger  
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Registration No. 33,055  
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Newport Beach, CA 92660  
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# SEQUENCE LISTING

<110> Anderson, David J.  
 Dong, Xinzhong  
 Zylka, Mark  
 Simon, Melvin  
 Han, Sang-kyou

<120> PAIN SIGNALING MOLECULES

<130> CALTE.004C1

<150> US 60/222,344

<151> 2000-08-01

<150> US 60/202,027

<151> 2000-05-04

<150> US 09/704,707

<151> 2000-11-03

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<151> 2001-04-19

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 35 40 45

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Tyr Ile Leu Asn Leu Ala Leu Ala Asp Phe Phe Phe Leu Leu Gly His	
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Ile Ile Asp Ser Ile Leu Leu Leu Leu Asn Val Phe Tyr Pro Ile Thr	
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Leu Ser Met Leu Ser Ala Ile Ser Thr Glu Arg Cys Leu Ser Val Leu	
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Cys Pro Ile Trp Tyr His Cys His Arg Pro Glu His Thr Ser Thr Val	
115 120 125	
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Met Cys Ala Val Ile Trp Val Leu Ser Leu Leu Ile Cys Ile Leu Asn	
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Ser Tyr Phe Cys Gly Phe Leu Asn Thr Gln Tyr Lys Asn Glu Asn Gly	
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Cys Leu Ala Leu Asn Phe Phe Thr Ala Ala Tyr Leu Met Phe Leu Phe	
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Val Val Leu Cys Leu Ser Ser Leu Ala Leu Val Ala Arg Leu Phe Cys	
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Gly Thr Gly Gln Ile Lys Leu Thr Arg Leu Tyr Val Thr Ile Ile Leu	
195 200 205	
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Ser Ile Leu Val Phe Leu Leu Cys Gly Leu Pro Phe Gly Ile His Trp	
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Phe Leu Leu Phe Lys Ile Lys Asp Asp Phe His Val Phe Asp Leu Gly	
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Phe Tyr Leu Ala Ser Val Val Leu Thr Ala Ile Asn Ser Cys Ala Asn	
245 250 255	
ccc atc att tac ttc ttc gtg gga tcc ttc agg cat cgg ttg aag cac	933
Pro Ile Ile Tyr Phe Phe Val Gly Ser Phe Arg His Arg Leu Lys His	
260 265 270	
cag acc ctc aaa atg gtt ctc cag aat gca ctg caa gac act cct gag	981

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 Val Tyr Ile Leu Asn Leu Ala Leu Ala Asp Phe Phe Phe Leu Leu Gly  
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 His Ile Ile Asp Ser Ile Leu Leu Leu Leu Asn Val Phe Tyr Pro Ile  
 65 70 75 80  
 Thr Phe Leu Leu Cys Phe Tyr Thr Ile Met Met Val Leu Tyr Ile Ala  
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 Leu Cys Pro Ile Trp Tyr His Cys His Arg Pro Glu His Thr Ser Thr  
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 Val Met Cys Ala Val Ile Trp Val Leu Ser Leu Leu Ile Cys Ile Leu  
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 145 150 155 160  
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Met Asp Glu Thr Leu Pro Gly Ser Ile Asn Ile Arg  
1 5 10

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Ile Leu Ile Pro Lys Leu Met Ile Ile Ile Phe Gly Leu Val Gly Leu  
15 20 25

atg gga aac gcc att gtg ttc tgg ctc ctg ggc ttc cac ttg cgc aag 268  
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30 35 40

aat gac ttc tca ctc tac atc cta aac ttg gcc cgg gct gac ttc ctt 316  
Asn Asp Phe Ser Leu Tyr Ile Leu Asn Leu Ala Arg Ala Asp Phe Leu  
45 50 55 60

ttc ctc ctc agt agt atc ata gct tcc acc ctg ttt ctt ctc aaa gtt 364  
Phe Leu Leu Ser Ser Ile Ile Ala Ser Thr Leu Phe Leu Leu Lys Val  
65 70 75

tcc tac ctc agc atc atc ttt cac ttg tgc ttt aac acc att atg atg 412  
Ser Tyr Leu Ser Ile Ile Phe His Leu Cys Phe Asn Thr Ile Met Met  
80 85 90

gtt gtc tac atc aca ggg ata agc atg ctc agt gcc atc agc act gag 460  
Val Val Tyr Ile Thr Gly Ile Ser Met Leu Ser Ala Ile Ser Thr Glu  
95 100 105

tgc tgc ctg tct gtc ctg tgc ccc acc tgg tat cgc tgc cac cgt cca 508  
Cys Cys Leu Ser Val Leu Cys Pro Thr Trp Tyr Arg Cys His Arg Pro  
110 115 120

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125 130 135 140

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145 150 155

tat gat aat gac aat gag tgt ctg gca act aac atc ttt acc gcc tcg 652  
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160 165 170

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His Val Thr Ile Leu Leu Thr Leu Leu Val Phe Leu Leu Cys Gly Leu			
205	210	215	220
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Pro Phe Val Ile Tyr Cys Ile Leu Leu Phe Lys Ile Lys Asp Asp Phe			
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cat gta tta gat gtt aat ttt tat cta gca tta gaa gtc ctg act gct			892
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	255	260	265
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Arg His Gln Leu Lys His Gln Thr Leu Lys Met Val Leu Gln Ser Ala			
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Asn Lys Ala Glu Pro			
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Ile	Pro	Gly	Ser	Ile	Asp	Ile	Glu	Thr	Leu	Ile	Pro	Asp	Leu	Met	Ile	
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Ile	Ile	Phe	Gly	Leu	Val	Gly	Leu	Thr	Gly	Asn	Ala	Ile	Val	Phe	Trp	
		25				30							35			

ctc	ctt	ggc	ttc	cgc	atg	cac	agg	act	gcc	ttc	tta	gtc	tac	atc	cta	320
Leu	Leu	Gly	Phe	Arg	Met	His	Arg	Thr	Ala	Phe	Leu	Val	Tyr	Ile	Leu	
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Asn Leu Ala Leu Ala Asp Phe Leu Phe Leu Leu Cys His Ile Ile Asn	
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Ser Thr Val Asp Leu Leu Lys Phe Thr Leu Pro Lys Gly Ile Phe Ala	
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Phe Cys Phe His Thr Ile Lys Arg Val Leu Tyr Ile Thr Gly Leu Ser	
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Met Leu Ser Ala Ile Ser Thr Glu Arg Cys Leu Ser Val Leu Cys Pro	
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Ile Trp Tyr His Cys Arg Arg Pro Glu His Thr Ser Thr Val Met Cys	
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Ala Val Ile Trp Val Leu Ser Leu Leu Ile Cys Ile Leu Asp Gly Tyr	
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Phe Cys Gly Tyr Leu Asp Asn His Tyr Phe Asn Tyr Ser Val Cys Gln	
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Ala Trp Asp Ile Phe Ile Gly Ala Tyr Leu Met Phe Leu Phe Val Val	
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Arg Asn Met Lys Phe Thr Arg Leu Phe Val Thr Ile Met Leu Thr Val	
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Leu Val Phe Leu Leu Cys Gly Leu Pro Trp Gly Ile Thr Trp Phe Leu	
215 220 225	
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Leu Phe Trp Ile Ala Pro Gly Val Phe Val Leu Asp Tyr Ser Pro Leu	
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Phe Val Gly Ser Phe Arg Gln Arg Leu Asn Lys Gln Thr Leu Lys Met	
265 270 275	
gtt ctc cag aaa gcc ctg cag gac act cct gag aca cct gaa aac atg	1040

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Val Glu Met Ser Arg Asn Lys Ala Glu Pro  
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Ile Val Phe Trp Leu Leu Gly Phe Arg Met His Arg Thr Ala Phe Leu  
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Val Tyr Ile Leu Asn Leu Ala Leu Ala Asp Phe Leu Phe Leu Leu Cys  
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His Ile Ile Asn Ser Thr Val Asp Leu Leu Lys Phe Thr Leu Pro Lys  
65 70 75 80  
Gly Ile Phe Ala Phe Cys Phe His Thr Ile Lys Arg Val Leu Tyr Ile  
85 90 95  
Thr Gly Leu Ser Met Leu Ser Ala Ile Ser Thr Glu Arg Cys Leu Ser  
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Val Leu Cys Pro Ile Trp Tyr His Cys Arg Arg Pro Glu His Thr Ser  
115 120 125  
Thr Val Met Cys Ala Val Ile Trp Val Leu Ser Leu Leu Ile Cys Ile  
130 135 140  
Leu Asp Gly Tyr Phe Cys Gly Tyr Leu Asp Asn His Tyr Phe Asn Tyr  
145 150 155 160  
Ser Val Cys Gln Ala Trp Asp Ile Phe Ile Gly Ala Tyr Leu Met Phe  
165 170 175  
Leu Phe Val Val Leu Cys Leu Ser Thr Leu Ala Leu Leu Ala Arg Leu  
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Phe Cys Gly Ala Arg Asn Met Lys Phe Thr Arg Leu Phe Val Thr Ile  
195 200 205  
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210 215 220  
Thr Trp Phe Leu Leu Phe Trp Ile Ala Pro Gly Val Phe Val Leu Asp  
225 230 235 240  
Tyr Ser Pro Leu Leu Val Leu Thr Ala Ile Asn Ser Cys Ala Asn Pro  
245 250 255  
Ile Ile Tyr Phe Phe Val Gly Ser Phe Arg Gln Arg Leu Asn Lys Gln  
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 35 40 45  
 ggg tgt ctg gca ttg agc ttc ttt act gct gca tac ctg atg ttt ttg 192  
 Gly Cys Leu Ala Leu Ser Phe Phe Thr Ala Ala Tyr Leu Met Phe Leu  
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 ttt gtg gtc ctc tgt ctg tcc agc ctg gct ctg gtg gcc agg ttg ttc 240  
 Phe Val Val Leu Cys Leu Ser Ser Leu Ala Leu Val Ala Arg Leu Phe  
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 Leu Thr Val Leu Val Phe Leu Leu Cys Gly Leu Pro Trp Gly Ile Thr  
 100 105 110  
 tgg ttc ctg tta ttc tgg att gca cct ggt gtg ttt gta cta gat tat 384  
 Trp Phe Leu Leu Phe Trp Ile Ala Pro Gly Val Phe Val Leu Asp Tyr  
 115 120 125  
 agc cct ctt ctg gtc cta act gct att aac agc tgt gcc aac ccc att 432  
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Asn Ser Tyr Phe Cys Gly Phe Leu Asn Thr Gln Tyr Lys Asn Glu Asn  
35 40 45  
Gly Cys Leu Ala Leu Ser Phe Phe Thr Ala Ala Tyr Leu Met Phe Leu  
50 55 60  
Phe Val Val Leu Cys Leu Ser Ser Leu Ala Leu Val Ala Arg Leu Phe  
65 70 75 80  
Cys Gly Ala Arg Asn Met Lys Phe Thr Arg Leu Phe Val Thr Ile Met  
85 90 95  
Leu Thr Val Leu Val Phe Leu Leu Cys Gly Leu Pro Trp Gly Ile Thr  
100 105 110  
Trp Phe Leu Leu Phe Trp Ile Ala Pro Gly Val Phe Val Leu Asp Tyr  
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<211> 459

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<220>

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Val Met Cys Ala Val Ile Trp Val Leu Ser Leu Leu Ile Cys Ile Leu  
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aat agc tat ttc tgt gct gtc tta cat acc aga tat gat aat gac aat 144  
Asn Ser Tyr Phe Cys Ala Val Leu His Thr Arg Tyr Asp Asn Asp Asn  
35 40 45  
gag tgt ctg gca act aac atc ttt acc gcc tcg tac atg ata ttt ttg 192  
Glu Cys Leu Ala Thr Asn Ile Phe Thr Ala Ser Tyr Met Ile Phe Leu  
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ctt gtg gtc ctc tgt ctg tcc agc ctg gct ctg ctg gcc agg ttg ttc 240  
Leu Val Val Leu Cys Leu Ser Ser Leu Ala Leu Leu Ala Arg Leu Phe  
65 70 75 80  
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Cys Gly Ala Gly Gln Met Lys Leu Thr Arg Phe His Val Thr Ile Leu  
85 90 95

ctg acc ctt ttg gtt ttt ctc ctc tgc ggg ttg ccc ttt gtc atc tac 336  
 Leu Thr Leu Leu Val Phe Leu Leu Cys Gly Leu Pro Phe Val Ile Tyr  
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 Cys Ile Leu Leu Phe Lys Ile Lys Asp Asp Phe His Val Leu Asp Val  
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aat ctt tat cta gca tta gaa gtc ctg act gct att aac agc tgt gcc 432  
 Asn Leu Tyr Leu Ala Leu Glu Val Leu Thr Ala Ile Asn Ser Cys Ala  
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 Asn Ser Tyr Phe Cys Ala Val Leu His Thr Arg Tyr Asp Asn Asp Asn  
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 Glu Cys Leu Ala Thr Asn Ile Phe Thr Ala Ser Tyr Met Ile Phe Leu  
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 Leu Val Val Leu Cys Leu Ser Ser Leu Ala Leu Leu Ala Arg Leu Phe  
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 Cys Gly Ala Gly Gln Met Lys Leu Thr Arg Phe His Val Thr Ile Leu  
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 Leu Thr Leu Leu Val Phe Leu Leu Cys Gly Leu Pro Phe Val Ile Tyr  
                   100                  105                  110  
 Cys Ile Leu Leu Phe Lys Ile Lys Asp Asp Phe His Val Leu Asp Val  
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 Asn Leu Tyr Leu Ala Leu Glu Val Leu Thr Ala Ile Asn Ser Cys Ala  
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Glu Arg Cys Leu Ser Val Leu Cys Pro Ile Trp Tyr Arg Cys Arg Arg  
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cca gaa cac aca tca act gtc ctg tgt gct gtg atc tgg ttc ctg ccc 2236  
 Pro Glu His Thr Ser Thr Val Leu Cys Ala Val Ile Trp Phe Leu Pro  
 125 130 135

ctg ttg atc tgc att ctg aat gga tat ttc tgt cat ttc ttt ggt ccc 2284  
 Leu Leu Ile Cys Ile Leu Asn Gly Tyr Phe Cys His Phe Phe Gly Pro  
 140 145 150 155

aaa tat gta att gac tct gtg tgt ctg gca acg aac ttc ttt atc aga 2332  
 Lys Tyr Val Ile Asp Ser Val Cys Leu Ala Thr Asn Phe Phe Ile Arg  
 160 165 170

aca tac ccg atg ttt ttg ttt ata gtc ctc tgt ctg tcc acc ctg gct 2380  
 Thr Tyr Pro Met Phe Leu Phe Ile Val Leu Cys Leu Ser Thr Leu Ala  
 175 180 185

ctg ctg gcc agg ttg ttc tgt ggt ggt ggg aag acg aaa ttt acc aga 2428  
 Leu Leu Ala Arg Leu Phe Cys Gly Gly Gly Lys Thr Lys Phe Thr Arg  
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tta ttc gtg acc atc atg ctg acc gtt ttg gtt ttt ctt ctc tgt ggg 2476  
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 220 225 230 235

ttc agt gta cta gat tat ata ctt ttt cag aca tca ctt gtc cta act 2572  
 Phe Ser Val Leu Asp Tyr Ile Leu Phe Gln Thr Ser Leu Val Leu Thr  
 240 245 250

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 Ser Val Asn Ser Cys Ala Asn Pro Ile Ile Tyr Phe Phe Val Gly Ser  
 255 260 265

ttc agg cat cgg ttg aag cac aag acc ctc aaa atg gtt ctc cag agt 2668  
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 270 275 280

gca ttg cag gac act cct gag aca cct gaa aac atg gtg gag atg tca 2716  
 Ala Leu Gln Asp Thr Pro Glu Thr Pro Glu Asn Met Val Glu Met Ser  
 285 290 295

aga agc aaa gca gag ccg tgatgaagag cctctacctg gacctcagag 2764  
 Arg Ser Lys Ala Glu Pro  
 300 305

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Ile Leu Phe Trp Leu Leu Gly Phe His Leu His Arg Asn Ala Phe Leu  
35 40 45  
Val Tyr Ile Leu Asn Leu Ala Leu Ala Asp Phe Leu Phe Leu Leu Cys  
50 55 60  
His Ile Ile Asn Ser Thr Met Leu Leu Leu Lys Val His Leu Pro Asn  
65 70 75 80  
Asn Ile Leu Asn His Cys Phe Asp Ile Ile Met Thr Val Leu Tyr Ile  
85 90 95  
Thr Gly Leu Ser Met Leu Ser Ala Ile Ser Thr Glu Arg Cys Leu Ser  
100 105 110  
Val Leu Cys Pro Ile Trp Tyr Arg Cys Arg Arg Pro Glu His Thr Ser  
115 120 125  
Thr Val Leu Cys Ala Val Ile Trp Phe Leu Pro Leu Leu Ile Cys Ile  
130 135 140  
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Ser Val Cys Leu Ala Thr Asn Phe Phe Ile Arg Thr Tyr Pro Met Phe  
165 170 175  
Leu Phe Ile Val Leu Cys Leu Ser Thr Leu Ala Leu Leu Ala Arg Leu  
180 185 190  
Phe Cys Gly Gly Gly Lys Thr Lys Phe Thr Arg Leu Phe Val Thr Ile  
195 200 205  
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210 215 220  
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225 230 235 240  
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245 250 255  
Ala Asn Pro Ile Ile Tyr Phe Phe Val Gly Ser Phe Arg His Arg Leu  
260 265 270  
Lys His Lys Thr Leu Lys Met Val Leu Gln Ser Ala Leu Gln Asp Thr  
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<220>

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<222> (170)...(574)

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Variable	Mean	SD	Min	Max	Median	Mode	Skewness	Kurtosis	Shapiro-Wilk	Normality
Age	35.2	12.5	18	65	32	30	0.15	2.8	0.98	Normal
Gender	1.2	0.4	1	2	1	1	0.05	1.2	0.99	Normal
Marital Status	2.1	0.8	1	3	2	2	0.10	2.5	0.97	Normal
Education	15.8	2.1	10	20	16	16	0.08	2.9	0.98	Normal
Income	4500	1500	1000	10000	3500	3000	0.20	3.5	0.95	Normal
Occupation	1.5	0.5	1	3	1	1	0.05	1.2	0.99	Normal
Health Status	2.5	0.6	1	3	2	2	0.10	2.5	0.97	Normal
Stress Level	3.2	0.9	1	5	3	3	0.15	2.8	0.98	Normal
Life Satisfaction	4.1	0.7	1	5	4	4	0.08	2.9	0.98	Normal
Resilience	3.8	0.8	1	5	3	3	0.12	2.7	0.97	Normal
Optimism	4.3	0.6	1	5	4	4	0.05	2.8	0.98	Normal
Emotional Stability	3.5	0.7	1	5	3	3	0.10	2.6	0.97	Normal
Self-Esteem	4.0	0.8	1	5	4	4	0.08	2.9	0.98	Normal
Life Satisfaction	4.1	0.7	1	5	4	4	0.08	2.9	0.98	Normal
Resilience	3.8	0.8	1	5	3	3	0.12	2.7	0.97	Normal
Optimism	4.3	0.6	1	5	4	4	0.05	2.8	0.98	Normal
Emotional Stability	3.5	0.7	1	5	3	3	0.10	2.6	0.97	Normal
Self-Esteem	4.0	0.8	1	5	4	4	0.08	2.9	0.98	Normal

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aag ccc atc atc atc atg tca gtg gga gct gcc att ctg ctc ttt ggc 370  
Lys Pro Ile Ile Ile Met Ser Val Gly Ala Ala Ile Leu Leu Phe Gly  
55 60 65

gtg gcc atc acc tgt gtg gcc tac atc ttg gaa gag aag cat aaa gtt 418  
Val Ala Ile Thr Cys Val Ala Tyr Ile Leu Glu Glu Lys His Lys Val  
70 75 80

gtg caa gtg ctc agg atg ata ggg cct gcc ttc ctg tcc ctg gga ctc 466  
Val Gln Val Leu Arg Met Ile Gly Pro Ala Phe Leu Ser Leu Gly Leu  
85 90 95

atg atg ctg gtg tgt ggg ctg gtg tgg gtc ccc ata atc aaa aag aag 514  
Met Met Leu Val Cys Gly Leu Val Trp Val Pro Ile Ile Lys Lys Lys  
100 105 110 115

cag aag caa agg cag aag tcc aac ttc ttc caa agc ctc aag ttc ttc 562  
Gln Lys Gln Arg Gln Lys Ser Asn Phe Phe Gln Ser Leu Lys Phe Phe  
120 125 130

ctc ctg aac cgc tgatgactgg ttgtocagaa gatctgctaa ccaataagca 614  
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135

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<213> Homo sapiens

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cagagtcagc aagaactgga tttcaaactg gatttgagga cccccacctt ttgatagggtg 180  
acttattctc tgtgagtctc tgatctgccc tctttaaatg aggaagtaaa tcccacatgg 240  
cagggtgggtg gggagaatca gagatcatac agctgggtgat cacaactggt ttctgtttcc 300  
agggtcacca gactaggggtt tctgagc atg gat cca acc atc tca acc ttg gac 354  
Met Asp Pro Thr Ile Ser Thr Leu Asp  
1 5

aca gaa ctg aca cca atc aac gga act gag gag act ctt tgc tac aag 402  
Thr Glu Leu Thr Pro Ile Asn Gly Thr Glu Glu Thr Leu Cys Tyr Lys  
10 15 20 25

cag acc ttg agc ctc acg gtg ctg acg tgc atc gtt tcc ctt gtc ggg 450  
Gln Thr Leu Ser Leu Thr Val Leu Thr Cys Ile Val Ser Leu Val Gly  
30 35 40

ctg aca gga aac gca gtt gtg ctc tgg ctc ctg ggc tgc cgc atg cgc 498  
Leu Thr Gly Asn Ala Val Val Leu Trp Leu Leu Gly Cys Arg Met Arg  
45 50 55

agg aac gcc ttc tcc atc tac atc ctc aac ttg gcc gca gca gac ttc 546  
Arg Asn Ala Phe Ser Ile Tyr Ile Leu Asn Leu Ala Ala Ala Asp Phe  
60 65 70

ctc ttc ctc agc ggc cgc ctt ata tat tcc ctg tta agc ttc atc agt 594  
Leu Phe Leu Ser Gly Arg Leu Ile Tyr Ser Leu Leu Ser Phe Ile Ser  
75 80 85

atc ccc cat acc atc tct aaa atc ctc tat cct gtg atg atg ttt tcc 642  
Ile Pro His Thr Ile Ser Lys Ile Leu Tyr Pro Val Met Met Phe Ser  
90 95 100 105

tac ttt gca ggc ctg agc ttt ctg agt gcc gtg agc acc gag cgc tgc 690  
Tyr Phe Ala Gly Leu Ser Phe Leu Ser Ala Val Ser Thr Glu Arg Cys  
110 115 120

ctg tcc gtc ctg tgg ccc atc tgg tac cgc tgc cac cgc ccc aca cac 738  
Leu Ser Val Leu Trp Pro Ile Trp Tyr Arg Cys His Arg Pro Thr His  
125 130 135

ctg tca gcg gtg gtg tgt gtc ctg ctc tgg gcc ctg tcc ctg ctg cgg 786  
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140 145 150

agc atc ctg gag tgg atg tta tgt ggc ttc ctg ttc agt ggt gct gat 834  
Ser Ile Leu Glu Trp Met Leu Cys Gly Phe Leu Phe Ser Gly Ala Asp

155 160 165  
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Ser Ala Trp Cys Gln Thr Ser Asp Phe Ile Thr Val Ala Trp Leu Ile  
170 175 180 185  
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Phe Leu Cys Val Val Leu Cys Gly Ser Ser Leu Val Leu Leu Ile Arg  
190 195 200  
att ctc tgt gga tcc cgg aag ata ccg ctg acc agg ctg tac gtg acc 978  
Ile Leu Cys Gly Ser Arg Lys Ile Pro Leu Thr Arg Leu Tyr Val Thr  
205 210 215  
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220 225 230  
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Phe Cys His Val His Leu Val Ser Ile Phe Leu Ser Ala Leu Asn Ser  
250 255 260 265  
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Ser Ala Asn Pro Ile Ile Tyr Phe Phe Val Gly Ser Phe Arg Gln Arg  
270 275 280  
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285 290 295  
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Ala Ser Glu Val Asp Glu Gly Gly Gly Gln Leu Pro Glu Glu Ile Leu  
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Glu Leu Ser Gly Ser Arg Leu Glu Gln  
315 320  
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Leu Thr Cys Ile Val Ser Leu Val Gly Leu Thr Gly Asn Ala Val Val  
35 40 45  
Leu Trp Leu Leu Gly Cys Arg Met Arg Arg Asn Ala Phe Ser Ile Tyr  
50 55 60  
Ile Leu Asn Leu Ala Ala Ala Asp Phe Leu Phe Leu Ser Gly Arg Leu  
65 70 75 80  
Ile Tyr Ser Leu Leu Ser Phe Ile Ser Ile Pro His Thr Ile Ser Lys  
85 90 95  
Ile Leu Tyr Pro Val Met Met Phe Ser Tyr Phe Ala Gly Leu Ser Phe  
100 105 110  
Leu Ser Ala Val Ser Thr Glu Arg Cys Leu Ser Val Leu Trp Pro Ile  
115 120 125  
Trp Tyr Arg Cys His Arg Pro Thr His Leu Ser Ala Val Val Cys Val  
130 135 140  
Leu Leu Trp Ala Leu Ser Leu Leu Arg Ser Ile Leu Glu Trp Met Leu  
145 150 155 160  
Cys Gly Phe Leu Phe Ser Gly Ala Asp Ser Ala Trp Cys Gln Thr Ser  
165 170 175  
Asp Phe Ile Thr Val Ala Trp Leu Ile Phe Leu Cys Val Val Leu Cys  
180 185 190  
Gly Ser Ser Leu Val Leu Leu Ile Arg Ile Leu Cys Gly Ser Arg Lys  
195 200 205  
Ile Pro Leu Thr Arg Leu Tyr Val Thr Ile Leu Leu Thr Val Leu Val  
210 215 220  
Phe Leu Leu Cys Gly Leu Pro Phe Gly Ile Gln Phe Phe Leu Phe Leu  
225 230 235 240  
Trp Ile His Val Asp Arg Glu Val Leu Phe Cys His Val His Leu Val  
245 250 255  
Ser Ile Phe Leu Ser Ala Leu Asn Ser Ser Ala Asn Pro Ile Ile Tyr  
260 265 270  
Phe Phe Val Gly Ser Phe Arg Gln Arg Gln Asn Arg Gln Asn Leu Lys  
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Glu Gln

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gctcaagtct tgtttttggt tccaggggca ccagtggagg ttttctgagc atg gat 176
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Pro Thr Thr Pro Ala Trp Gly Thr Glu Ser Thr Thr Val Asn Gly Asn
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Asp Gln Ala Leu Leu Leu Leu Cys Gly Lys Glu Thr Leu Ile Pro Val
      20                      25                      30

ttc ctg atc ctt ttc att gcc ctg gtc ggg ctg gta gga aac ggg ttt 320
Phe Leu Ile Leu Phe Ile Ala Leu Val Gly Leu Val Gly Asn Gly Phe
      35                      40                      45                      50

gtg ctc tgg ctc ctg ggc ttc cgc atg cgc agg aac gcc ttc tct gtc 368
Val Leu Trp Leu Leu Gly Phe Arg Met Arg Arg Asn Ala Phe Ser Val
                        55                      60                      65

tac gtc ctc agc ctg gcc ggg gcc gac ttc ctc ttc ctc tgc ttc cag 416
Tyr Val Leu Ser Leu Ala Gly Ala Asp Phe Leu Phe Leu Cys Phe Gln
                        70                      75                      80

att ata aat tgc ctg gtg tac ctc agt aac ttc ttc tgt tcc atc tcc 464
Ile Ile Asn Cys Leu Val Tyr Leu Ser Asn Phe Phe Cys Ser Ile Ser
                        85                      90                      95

atc aat ttc cct agc ttc ttc acc act gtg atg acc tgt gcc tac ctt 512
Ile Asn Phe Pro Ser Phe Phe Thr Thr Val Met Thr Cys Ala Tyr Leu
      100                      105                      110

gca ggc ctg agc atg ctg agc acc gtc agc acc gag cgc tgc ctg tcc 560
Ala Gly Leu Ser Met Leu Ser Thr Val Ser Thr Glu Arg Cys Leu Ser
      115                      120                      125                      130

gtc ctg tgg ccc atc tgg tat cgc tgc cgc cgc ccc aga cac ctg tca 608
Val Leu Trp Pro Ile Trp Tyr Arg Cys Arg Arg Pro Arg His Leu Ser
                        135                      140                      145

gcg gtc gtg tgt gtc ctg ctc tgg gcc ctg tcc cta ctg ctg agc atc 656
Ala Val Val Cys Val Leu Leu Trp Ala Leu Ser Leu Leu Leu Ser Ile
                        150                      155                      160

ttg gaa ggg aag ttc tgt ggc ttc tta ttt agt gat ggt gac tct ggt 704
Leu Glu Gly Lys Phe Cys Gly Phe Leu Phe Ser Asp Gly Asp Ser Gly
      165                      170                      175

tgg tgt cag aca ttt gat ttc atc act gca gcg tgg ctg att ttt tta 752
Trp Cys Gln Thr Phe Asp Phe Ile Thr Ala Ala Trp Leu Ile Phe Leu
      180                      185                      190

ttc atg gtt ctc tgt ggg tcc agt ctg gcc ctg ctg gtc agg atc ctc 800
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Phe Met Val Leu Cys Gly Ser Ser Leu Ala Leu Leu Val Arg Ile Leu  
195 200 205 210

tgt ggc tcc agg ggt ctg cca ctg acc agg ctg tac ctg acc atc ctg 848  
Cys Gly Ser Arg Gly Leu Pro Leu Thr Arg Leu Tyr Leu Thr Ile Leu  
215 220 225

ctc aca gtg ctg gtg ttc ctc ctc tgc ggc ctg ccc ttt ggc att cag 896  
Leu Thr Val Leu Val Phe Leu Leu Cys Gly Leu Pro Phe Gly Ile Gln  
230 235 240

tgg ttc cta ata tta tgg atc tgg aag gat tct gat gtc tta ttt tgt 944  
Trp Phe Leu Ile Leu Trp Ile Trp Lys Asp Ser Asp Val Leu Phe Cys  
245 250 255

cat att cat cca gtt tca gtt gtc ctg tca tct ctt aac agc agt gcc 992  
His Ile His Pro Val Ser Val Val Leu Ser Ser Leu Asn Ser Ser Ala  
260 265 270

aac ccc atc att tac ttc ttc gtg ggc tct ttt agg aag cag tgg cgg 1040  
Asn Pro Ile Ile Tyr Phe Phe Val Gly Ser Phe Arg Lys Gln Trp Arg  
275 280 285 290

ctg cag cag ccg atc ctc aag ctg gct ctc cag agg gct ctg cag gac 1088  
Leu Gln Gln Pro Ile Leu Lys Leu Ala Leu Gln Arg Ala Leu Gln Asp  
295 300 305

att gct gag gtg gat cac agt gaa gga tgc ttc cgt cag ggc acc ccg 1136  
Ile Ala Glu Val Asp His Ser Glu Gly Cys Phe Arg Gln Gly Thr Pro  
310 315 320

gag atg tcg aga agc agt ctg gtg tagagatgga cagcctctac ttccatcaga 1190  
Glu Met Ser Arg Ser Ser Leu Val  
325 330

tatatgtggc tttagagaggc aactttgccc ctgtctgtct gatttgctga actttctcag 1250  
tcctgatttt aaaacagtta agagagtcct tgtgaggatt aagtgagaca 1300

<210> 18  
<211> 330  
<212> PRT  
<213> Homo sapiens

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Gly Asn Asp Gln Ala Leu Leu Leu Leu Cys Gly Lys Glu Thr Leu Ile  
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Pro Val Phe Leu Ile Leu Phe Ile Ala Leu Val Gly Leu Val Gly Asn  
35 40 45  
Gly Phe Val Leu Trp Leu Leu Gly Phe Arg Met Arg Arg Asn Ala Phe  
50 55 60  
Ser Val Tyr Val Leu Ser Leu Ala Gly Ala Asp Phe Leu Phe Leu Cys  
65 70 75 80  
Phe Gln Ile Ile Asn Cys Leu Val Tyr Leu Ser Asn Phe Phe Cys Ser  
85 90 95  
Ile Ser Ile Asn Phe Pro Ser Phe Phe Thr Thr Val Met Thr Cys Ala



<210> 20  
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<212> DNA  
<213> Mus musculus

<220>  
<221> CDS  
<222> (83)...(943)

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ctggattctg acccgaaact ag atg atc atc ata ttc aga ctg gtt ggg atg 112  
Met Ile Ile Ile Phe Arg Leu Val Gly Met  
1 5 10  
  
aca gga aat gcc att gtg ttc tgg ctc ctg ggc ttc agc ttg cac agg 160  
Thr Gly Asn Ala Ile Val Phe Trp Leu Leu Gly Phe Ser Leu His Arg  
15 20 25  
  
aat gcc ttc tca gtc tac att tta aac ttg gcc ctt gct gac ttc gtc 208  
Asn Ala Phe Ser Val Tyr Ile Leu Asn Leu Ala Leu Ala Asp Phe Val  
30 35 40  
  
ttc ctc ctc tgt cac atc ata gat tcc atg ctg ctt ctt ctc act gtt 256  
Phe Leu Leu Cys His Ile Ile Asp Ser Met Leu Leu Leu Leu Thr Val  
45 50 55  
  
ttc tac ccc aac aat atc ttt tct ggg tac ttt tac acc atc atg acg 304  
Phe Tyr Pro Asn Asn Ile Phe Ser Gly Tyr Phe Tyr Thr Ile Met Thr  
60 65 70  
  
gtt ccc tac atc gca ggc ctg agc atg ctc agt gcc atc agc act gag 352  
Val Pro Tyr Ile Ala Gly Leu Ser Met Leu Ser Ala Ile Ser Thr Glu  
75 80 85 90  
  
ctc tgc ctg tct gtc ctg tgc ccc atc tgg tat cgc tgc cac cac cca 400  
Leu Cys Leu Ser Val Leu Cys Pro Ile Trp Tyr Arg Cys His His Pro  
95 100 105  
  
gaa cac aca tca act gtc atg tgt gct gcg ata tgg gtc ctg ccc ctg 448  
Glu His Thr Ser Thr Val Met Cys Ala Ala Ile Trp Val Leu Pro Leu  
110 115 120  
  
ttg gtc tgc att ctg aat agg tat ttc tgc agt ttc tta gat atc aat 496  
Leu Val Cys Ile Leu Asn Arg Tyr Phe Cys Ser Phe Leu Asp Ile Asn  
125 130 135  
  
tat aac aat gac aaa cag tgt ctg gca tca aac ttc ttt act aga gca 544  
Tyr Asn Asn Asp Lys Gln Cys Leu Ala Ser Asn Phe Phe Thr Arg Ala  
140 145 150  
  
tac ctg atg ttt ttg ttt gtg gtc ctt tgt ctg tcc agc atg gct ctg 592  
Tyr Leu Met Phe Leu Phe Val Val Leu Cys Leu Ser Ser Met Ala Leu  
155 160 165 170  
  
ctg gcc agg ttg ttc tgt ggc act ggg cag atg aag ctt acc aga ttg 640  
Leu Ala Arg Leu Phe Cys Gly Thr Gly Gln Met Lys Leu Thr Arg Leu

	175	180	185	
tac gtg acc atc atg ctg act gtt ttg ggt ttt ctc ctc tgt ggg ttg				688
Tyr Val Thr Ile Met Leu Thr Val Leu Gly Phe Leu Leu Cys Gly Leu				
	190	195	200	
ccc ttt gtc atc tac tac ttc ctg tta ttc aat att aag gat ggt ttt				736
Pro Phe Val Ile Tyr Tyr Phe Leu Leu Phe Asn Ile Lys Asp Gly Phe				
	205	210	215	
tgt tta ttt gat ttt aga ttt tat atg tca aca cat gtc ctg act gct				784
Cys Leu Phe Asp Phe Arg Phe Tyr Met Ser Thr His Val Leu Thr Ala				
	220	225	230	
att aac aac tgt gcc aac ccc ata att tac ttt ttc gag ggc tcc ttc				832
Ile Asn Asn Cys Ala Asn Pro Ile Ile Tyr Phe Phe Glu Gly Ser Phe				
	235	240	245	250
agg cat cag ttg aag cac cag acc ctc aaa atg gtt ctc cag agt gta				880
Arg His Gln Leu Lys His Gln Thr Leu Lys Met Val Leu Gln Ser Val				
	255	260	265	
ctg cag gac act cct gag ata gct gaa aat atg gtg gag atg tca aga				928
Leu Gln Asp Thr Pro Glu Ile Ala Glu Asn Met Val Glu Met Ser Arg				
	270	275	280	
aac ata cca aag cca tgatgaaaag cctttgcctg gacctca				970
Asn Ile Pro Lys Pro				
	285			

<210> 21  
 <211> 287  
 <212> PRT  
 <213> Mus musculus

<400> 21  
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 Phe Trp Leu Leu Gly Phe Ser Leu His Arg Asn Ala Phe Ser Val Tyr  
 20 25 30  
 Ile Leu Asn Leu Ala Leu Ala Asp Phe Val Phe Leu Leu Cys His Ile  
 35 40 45  
 Ile Asp Ser Met Leu Leu Leu Thr Val Phe Tyr Pro Asn Asn Ile  
 50 55 60  
 Phe Ser Gly Tyr Phe Tyr Thr Ile Met Thr Val Pro Tyr Ile Ala Gly  
 65 70 75 80  
 Leu Ser Met Leu Ser Ala Ile Ser Thr Glu Leu Cys Leu Ser Val Leu  
 85 90 95  
 Cys Pro Ile Trp Tyr Arg Cys His His Pro Glu His Thr Ser Thr Val  
 100 105 110  
 Met Cys Ala Ala Ile Trp Val Leu Pro Leu Leu Val Cys Ile Leu Asn  
 115 120 125  
 Arg Tyr Phe Cys Ser Phe Leu Asp Ile Asn Tyr Asn Asn Asp Lys Gln  
 130 135 140  
 Cys Leu Ala Ser Asn Phe Phe Thr Arg Ala Tyr Leu Met Phe Leu Phe  
 145 150 155 160

Val Val Leu Cys Leu Ser Ser Met Ala Leu Leu Ala Arg Leu Phe Cys  
165 170 175  
Gly Thr Gly Gln Met Lys Leu Thr Arg Leu Tyr Val Thr Ile Met Leu  
180 185 190  
Thr Val Leu Gly Phe Leu Leu Cys Gly Leu Pro Phe Val Ile Tyr Tyr  
195 200 205  
Phe Leu Leu Phe Asn Ile Lys Asp Gly Phe Cys Leu Phe Asp Phe Arg  
210 215 220  
Phe Tyr Met Ser Thr His Val Leu Thr Ala Ile Asn Asn Cys Ala Asn  
225 230 235 240  
Pro Ile Ile Tyr Phe Phe Glu Gly Ser Phe Arg His Gln Leu Lys His  
245 250 255  
Gln Thr Leu Lys Met Val Leu Gln Ser Val Leu Gln Asp Thr Pro Glu  
260 265 270  
Ile Ala Glu Asn Met Val Glu Met Ser Arg Asn Ile Pro Lys Pro  
275 280 285

<210> 22  
<211> 1024  
<212> DNA  
<213> Mus musculus

<220>  
<221> CDS  
<222> (16)...(918)

<400> 22  
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1 5 10  
aac ttg atg atc gtc atc ctc gga cta gtc ggg ctg aca gga aac gcc 99  
Asn Leu Met Ile Val Ile Leu Gly Leu Val Gly Leu Thr Gly Asn Ala  
15 20 25  
att gtg ttc tgg ctc ctg ctc ttc cgc ttg cgc agg aac gcc ttc tca 147  
Ile Val Phe Trp Leu Leu Leu Phe Arg Leu Arg Arg Asn Ala Phe Ser  
30 35 40  
atc tac atc cta aac ttg gcc ctg gct gac ttc ctc ttc ctc ctc tgc 195  
Ile Tyr Ile Leu Asn Leu Ala Leu Ala Asp Phe Leu Phe Leu Leu Cys  
45 50 55 60  
cac atc ata gct tcc aca gag cat att ctc acg ttt tcc tcc ccc aac 243  
His Ile Ile Ala Ser Thr Glu His Ile Leu Thr Phe Ser Ser Pro Asn  
65 70 75  
agt atc ttt atc aat tgc ctt tac acc ttc agg gtg ctt ctc tac atc 291  
Ser Ile Phe Ile Asn Cys Leu Tyr Thr Phe Arg Val Leu Leu Tyr Ile  
80 85 90  
gca ggc ctg agc atg ctc agt gcc atc agc att gag cgc tgc ctg tct 339  
Ala Gly Leu Ser Met Leu Ser Ala Ile Ser Ile Glu Arg Cys Leu Ser  
95 100 105  
gtc atg tgc ccc atc tgg tat cgc tgc cac agc cca gaa cac aca tca 387

Val Met Cys Pro Ile Trp Tyr Arg Cys His Ser Pro Glu His Thr Ser  
 110 115 120

act gtc atg tgt gct atg atc tgg gtc ctg tct cta ttg ctc tgc att 435  
 Thr Val Met Cys Ala Met Ile Trp Val Leu Ser Leu Leu Leu Cys Ile  
 125 130 135 140

ctg tat agg tat ttc tgc ggc ttc ttg gat acc aaa tat gaa gat gac 483  
 Leu Tyr Arg Tyr Phe Cys Gly Phe Leu Asp Thr Lys Tyr Glu Asp Asp  
 145 150 155

tat ggg tgt cta gca atg aac ttc ctt act acc gca tac ctg atg ttt 531  
 Tyr Gly Cys Leu Ala Met Asn Phe Leu Thr Thr Ala Tyr Leu Met Phe  
 160 165 170

ttg ttt gta gtc ctc tgt gtg tcc agc ctg gct ctg ctg gcc agg ttg 579  
 Leu Phe Val Val Leu Cys Val Ser Ser Leu Ala Leu Leu Ala Arg Leu  
 175 180 185

ttc tgt ggc gct gga cgg atg aag ctt acc aga tta tac gtg acc atc 627  
 Phe Cys Gly Ala Gly Arg Met Lys Leu Thr Arg Leu Tyr Val Thr Ile  
 190 195 200

acg ctg acc ctt ttg gtt ttt ctc ctc tgc ggg ttg ccc tgt ggc ttc 675  
 Thr Leu Thr Leu Leu Val Phe Leu Leu Cys Gly Leu Pro Cys Gly Phe  
 205 210 215 220

tac tgg ttc ctg tta tcc aaa att aag aat gtt ttt act gta ttt gaa 723  
 Tyr Trp Phe Leu Ser Lys Ile Lys Asn Val Phe Thr Val Phe Glu  
 225 230 235

ttt agt ctt tat ctg gca tca gtt gtc ctg act gct att aac agc tgt 771  
 Phe Ser Leu Tyr Leu Ala Ser Val Val Leu Thr Ala Ile Asn Ser Cys  
 240 245 250

gcc aac ccc atc att tac ttc ttt gtg ggc tca ttc agg cat cgg ttg 819  
 Ala Asn Pro Ile Ile Tyr Phe Phe Val Gly Ser Phe Arg His Arg Leu  
 255 260 265

aag cac cag acc ctc aaa atg gtt ctc cag agt gca ctg cag gac act 867  
 Lys His Gln Thr Leu Lys Met Val Leu Gln Ser Ala Leu Gln Asp Thr  
 270 275 280

cct gag aca cct gaa aac atg gtg gag atg tca aga aac aaa gca gag 915  
 Pro Glu Thr Pro Glu Asn Met Val Glu Met Ser Arg Asn Lys Ala Glu  
 285 290 295 300

ctg tgatgaagag cctctgcccg gacctcagag gtggctttgg agtgagcact 968  
 Leu

gccctgctgc acttggccac tgtccactct cctctcagct tactcacttg gcatgc 1024

<210> 23

<211> 301

<212> PRT

<213> Mus musculus

110 115 120 125 130 135 140 145 150 155 160 165 170 175 180 185 190 195 200 205 210 215 220 225 230 235 240 245 250 255 260 265 270 275 280 285 290 295 300

<400> 23

Met His Arg Ser Ile Ser Ile Arg Ile Leu Ile Thr Asn Leu Met Ile  
1 5 10 15  
Val Ile Leu Gly Leu Val Gly Leu Thr Gly Asn Ala Ile Val Phe Trp  
20 25 30  
Leu Leu Leu Phe Arg Leu Arg Arg Asn Ala Phe Ser Ile Tyr Ile Leu  
35 40 45  
Asn Leu Ala Leu Ala Asp Phe Leu Phe Leu Leu Cys His Ile Ile Ala  
50 55 60  
Ser Thr Glu His Ile Leu Thr Phe Ser Ser Pro Asn Ser Ile Phe Ile  
65 70 75 80  
Asn Cys Leu Tyr Thr Phe Arg Val Leu Leu Tyr Ile Ala Gly Leu Ser  
85 90 95  
Met Leu Ser Ala Ile Ser Ile Glu Arg Cys Leu Ser Val Met Cys Pro  
100 105 110  
Ile Trp Tyr Arg Cys His Ser Pro Glu His Thr Ser Thr Val Met Cys  
115 120 125  
Ala Met Ile Trp Val Leu Ser Leu Leu Leu Cys Ile Leu Tyr Arg Tyr  
130 135 140  
Phe Cys Gly Phe Leu Asp Thr Lys Tyr Glu Asp Asp Tyr Gly Cys Leu  
145 150 155 160  
Ala Met Asn Phe Leu Thr Thr Ala Tyr Leu Met Phe Leu Phe Val Val  
165 170 175  
Leu Cys Val Ser Ser Leu Ala Leu Leu Ala Arg Leu Phe Cys Gly Ala  
180 185 190  
Gly Arg Met Lys Leu Thr Arg Leu Tyr Val Thr Ile Thr Leu Thr Leu  
195 200 205  
Leu Val Phe Leu Leu Cys Gly Leu Pro Cys Gly Phe Tyr Trp Phe Leu  
210 215 220  
Leu Ser Lys Ile Lys Asn Val Phe Thr Val Phe Glu Phe Ser Leu Tyr  
225 230 235 240  
Leu Ala Ser Val Val Leu Thr Ala Ile Asn Ser Cys Ala Asn Pro Ile  
245 250 255  
Ile Tyr Phe Phe Val Gly Ser Phe Arg His Arg Leu Lys His Gln Thr  
260 265 270  
Leu Lys Met Val Leu Gln Ser Ala Leu Gln Asp Thr Pro Glu Thr Pro  
275 280 285  
Glu Asn Met Val Glu Met Ser Arg Asn Lys Ala Glu Leu  
290 295 300

<210> 24

<211> 1045

<212> DNA

<213> Mus musculus

<220>

<221> CDS

<222> (106)...(1020)

<400> 24

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Met Asp Glu Thr

agc cct aga agt att gac atc gag tca ctg atc cca aac ttg atg atc	165
Ser Pro Arg Ser Ile Asp Ile Glu Ser Leu Ile Pro Asn Leu Met Ile	
5 10 15 20	
atc atc ttt gga ctg gtt ggg ctg aca gga aat gcc att gtg ctc tgg	213
Ile Ile Phe Gly Leu Val Gly Leu Thr Gly Asn Ala Ile Val Leu Trp	
25 30 35	
ctc ctg ggc ttc tgc ttg cac agg aat gcc ttc tta gtc tac atc cta	261
Leu Leu Gly Phe Cys Leu His Arg Asn Ala Phe Leu Val Tyr Ile Leu	
40 45 50	
aac ttg gcc ctg gct gac ttc ctc ttc ctt ctc tgt cac ttc ata aat	309
Asn Leu Ala Leu Ala Asp Phe Leu Phe Leu Leu Cys His Phe Ile Asn	
55 60 65	
tca gca atg ttt ctt ctc aag gtt cct ata ccc aac ggt atc ttt gtc	357
Ser Ala Met Phe Leu Leu Lys Val Pro Ile Pro Asn Gly Ile Phe Val	
70 75 80	
tat tgc ttt tac acc atc aaa atg gtt ctc tac atc aca ggc ctg agc	405
Tyr Cys Phe Tyr Thr Ile Lys Met Val Leu Tyr Ile Thr Gly Leu Ser	
85 90 95 100	
atg ctc agt gcc atc agc act gag cgc tgc ctt tct gtc ctg tgc ccc	453
Met Leu Ser Ala Ile Ser Thr Glu Arg Cys Leu Ser Val Leu Cys Pro	
105 110 115	
atc tgg tat cac tgc cgc cgc cca gaa cac aca tca act gtc atg tgt	501
Ile Trp Tyr His Cys Arg Arg Pro Glu His Thr Ser Thr Val Met Cys	
120 125 130	
gct gtg att tgg atc ttt tcc gtg ttg atc tgc att ctg aaa gaa tat	549
Ala Val Ile Trp Ile Phe Ser Val Leu Ile Cys Ile Leu Lys Glu Tyr	
135 140 145	
ttc tgt gat ttc ttt ggt acc aaa ttg gga aat tac tat gtg tgt cag	597
Phe Cys Asp Phe Phe Gly Thr Lys Leu Gly Asn Tyr Tyr Val Cys Gln	
150 155 160	
gca tcc aac ttc ttt atg gga gca tac cta atg ttt ttg ttt gta gtc	645
Ala Ser Asn Phe Phe Met Gly Ala Tyr Leu Met Phe Leu Phe Val Val	
165 170 175 180	
ctc tgt ctg tcc acc ctg gct ctg ctg gcc agg ttg ttc tgt ggt gct	693
Leu Cys Leu Ser Thr Leu Ala Leu Leu Ala Arg Leu Phe Cys Gly Ala	
185 190 195	
gag aag atg aaa ttt acc aga tta ttc gtg acc atc atg ctg acc att	741
Glu Lys Met Lys Phe Thr Arg Leu Phe Val Thr Ile Met Leu Thr Ile	
200 205 210	
ttg gtt ttt ctc ctc tgt ggg ttg cca tgg ggc ttc ttc tgg ttc ctg	789
Leu Val Phe Leu Leu Cys Gly Leu Pro Trp Gly Phe Phe Trp Phe Leu	
215 220 225	
tta atc tgg att aag ggt ggt ttt agt gta cta gat tat aga ctt tat	837

Leu Ile Trp Ile Lys Gly Gly Phe Ser Val Leu Asp Tyr Arg Leu Tyr  
 230 235 240  
 ttg gca tca att gtc cta act gtt gtt aac agc tgt gcc aac ccc atc 885  
 Leu Ala Ser Ile Val Leu Thr Val Val Asn Ser Cys Ala Asn Pro Ile  
 245 250 255 260  
 att tac ttc ttc gtg gga tca ttc agg cat cgg ttg aag cac cag acc 933  
 Ile Tyr Phe Phe Val Gly Ser Phe Arg His Arg Leu Lys His Gln Thr  
 265 270 275  
 ctc aaa atg gtt ctc cag agt gca ctg cag gac act cct gag aca cat 981  
 Leu Lys Met Val Leu Gln Ser Ala Leu Gln Asp Thr Pro Glu Thr His  
 280 285 290  
 gaa aac atg gtg gag atg tca aga atc aaa gca gag cag tgatgaagag 1030  
 Glu Asn Met Val Glu Met Ser Arg Ile Lys Ala Glu Gln  
 295 300 305  
 cctctgcctg gacct 1045

<210> 25  
 <211> 305  
 <212> PRT  
 <213> Mus musculus

<400> 25  
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 20 25 30  
 Ile Val Leu Trp Leu Leu Gly Phe Cys Leu His Arg Asn Ala Phe Leu  
 35 40 45  
 Val Tyr Ile Leu Asn Leu Ala Leu Ala Asp Phe Leu Phe Leu Leu Cys  
 50 55 60  
 His Phe Ile Asn Ser Ala Met Phe Leu Leu Lys Val Pro Ile Pro Asn  
 65 70 75 80  
 Gly Ile Phe Val Tyr Cys Phe Tyr Thr Ile Lys Met Val Leu Tyr Ile  
 85 90 95  
 Thr Gly Leu Ser Met Leu Ser Ala Ile Ser Thr Glu Arg Cys Leu Ser  
 100 105 110  
 Val Leu Cys Pro Ile Trp Tyr His Cys Arg Arg Pro Glu His Thr Ser  
 115 120 125  
 Thr Val Met Cys Ala Val Ile Trp Ile Phe Ser Val Leu Ile Cys Ile  
 130 135 140  
 Leu Lys Glu Tyr Phe Cys Asp Phe Phe Gly Thr Lys Leu Gly Asn Tyr  
 145 150 155 160  
 Tyr Val Cys Gln Ala Ser Asn Phe Phe Met Gly Ala Tyr Leu Met Phe  
 165 170 175  
 Leu Phe Val Val Leu Cys Leu Ser Thr Leu Ala Leu Leu Ala Arg Leu  
 180 185 190  
 Phe Cys Gly Ala Glu Lys Met Lys Phe Thr Arg Leu Phe Val Thr Ile  
 195 200 205  
 Met Leu Thr Ile Leu Val Phe Leu Leu Cys Gly Leu Pro Trp Gly Phe  
 210 215 220  
 Phe Trp Phe Leu Leu Ile Trp Ile Lys Gly Gly Phe Ser Val Leu Asp  
 225 230 235 240

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<221> CDS
<222> (45)...(959)
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<400> 26																	
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						1											
atc	ctt	gga	agt	att	gac	atc	gag	acc	ctg	atc	cga	cat	ttg	atg	atc	104	
Ile	Leu	Gly	Ser	Ile	Asp	Ile	Glu	Thr	Leu	Ile	Arg	His	Leu	Met	Ile		
5					10					15						20	
atc	atc	ttc	gga	ctg	gtc	ggg	ctg	aca	gga	aat	gcc	att	gtg	ttc	tgg	152	
Ile	Ile	Phe	Gly	Leu	Val	Gly	Leu	Thr	Gly	Asn	Ala	Ile	Val	Phe	Trp		
				25					30						35		
ctc	ctg	ggc	ttc	cac	ttg	cac	agg	aat	gcc	ttc	tta	gtc	tac	atc	ata	200	
Leu	Leu	Gly	Phe	His	Leu	His	Arg	Asn	Ala	Phe	Leu	Val	Tyr	Ile	Ile		
			40					45						50			
aac	ttg	gcc	ctg	gct	gac	ttc	ttc	tat	ctg	ctc	tgt	cac	atc	ata	aat	248	
Asn	Leu	Ala	Leu	Ala	Asp	Phe	Phe	Tyr	Leu	Leu	Cys	His	Ile	Ile	Asn		
			55					60						65			
tcc	ata	atg	ttt	ctt	ctc	aag	gtt	ccc	tca	ccc	aac	att	atc	ttg	gac	296	
Ser	Ile	Met	Phe	Leu	Leu	Lys	Val	Pro	Ser	Pro	Asn	Ile	Ile	Leu	Asp		
		70					75						80				
cat	tgc	ttt	tac	acc	atc	atg	ata	gtt	ctc	tac	atc	aca	ggc	ctg	agc	344	
His	Cys	Phe	Tyr	Thr	Ile	Met	Ile	Val	Leu	Tyr	Ile	Thr	Gly	Leu	Ser		
		85					90						95				
atg	ctc	agc	gcc	atc	agc	act	gag	cgc	tgc	ctg	tct	gtc	ctg	tgc	ccc	392	
Met	Leu	Ser	Ala	Ile	Ser	Thr	Glu	Arg	Cys	Leu	Ser	Val	Leu	Cys	Pro		
				105					110						115		
atc	tgg	tat	cgc	tgc	cac	cgt	cca	gaa	cac	aca	tca	act	gtc	atg	tgt	440	
Ile	Trp	Tyr	Arg	Cys	His	Arg	Pro	Glu	His	Thr	Ser	Thr	Val	Met	Cys		
			120					125						130			

gct gtg atc tgg gta atg tcc ctg ttg atc tct att ctc aat gga tat	488
Ala Val Ile Trp Val Met Ser Leu Leu Ile Ser Ile Leu Asn Gly Tyr	
135 140 145	
ttc tgt aat ttc tct agt ccc aaa tat gta aat aac tct gtg tgt cag	536
Phe Cys Asn Phe Ser Ser Pro Lys Tyr Val Asn Asn Ser Val Cys Gln	
150 155 160	
gca tca cac atc ttt atc aga aca tac cca ata ttt ttg ttt gta ctc	584
Ala Ser His Ile Phe Ile Arg Thr Tyr Pro Ile Phe Leu Phe Val Leu	
165 170 175 180	
ctc tgt ctg tcc acc ctt gct ctg ctg gcc agg ttg ttc tct ggt gct	632
Leu Cys Leu Ser Thr Leu Ala Leu Leu Ala Arg Leu Phe Ser Gly Ala	
185 190 195	
ggg aag agg aaa ttt acc aga tta ttc gtg acc atc atg ctg gcc att	680
Gly Lys Arg Lys Phe Thr Arg Leu Phe Val Thr Ile Met Leu Ala Ile	
200 205 210	
ttg gtt ttt ctt ctc tgt ggg tta ccc ctg ggc ttc ttc tgg ttt ctg	728
Leu Val Phe Leu Leu Cys Gly Leu Pro Leu Gly Phe Phe Trp Phe Leu	
215 220 225	
tca ccc tgg att gag gat cgt ttc att gta cta gat tat aga ctt ttt	776
Ser Pro Trp Ile Glu Asp Arg Phe Ile Val Leu Asp Tyr Arg Leu Phe	
230 235 240	
ttt gca tca gtt gtc cta act gtt gtt aac agc tgt gcc aac ccc atc	824
Phe Ala Ser Val Val Leu Thr Val Val Asn Ser Cys Ala Asn Pro Ile	
245 250 255 260	
att tac ttc ttt gtg ggc tcc ttc agg cat cgg ttg aag caa cag acc	872
Ile Tyr Phe Phe Val Gly Ser Phe Arg His Arg Leu Lys Gln Gln Thr	
265 270 275	
ctc aaa atg ttt ctc cag aga gca ctg cag gac acc cct gag aca cct	920
Leu Lys Met Phe Leu Gln Arg Ala Leu Gln Asp Thr Pro Glu Thr Pro	
280 285 290	
gaa aac atg gtg gag atg tca aga agc aaa gca gag ccg tgatgaagag	969
Glu Asn Met Val Glu Met Ser Arg Ser Lys Ala Glu Pro	
295 300 305	
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 <213> Mus musculus

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 His Leu Met Ile Ile Ile Phe Gly Leu Val Gly Leu Thr Gly Asn Ala  
 20 25 30

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Ile Val Phe Trp Leu Leu Gly Phe His Leu His Arg Asn Ala Phe Leu  
 35 40 45  
 Val Tyr Ile Ile Asn Leu Ala Leu Ala Asp Phe Phe Tyr Leu Leu Cys  
 50 55 60  
 His Ile Ile Asn Ser Ile Met Phe Leu Leu Lys Val Pro Ser Pro Asn  
 65 70 75 80  
 Ile Ile Leu Asp His Cys Phe Tyr Thr Ile Met Ile Val Leu Tyr Ile  
 85 90 95  
 Thr Gly Leu Ser Met Leu Ser Ala Ile Ser Thr Glu Arg Cys Leu Ser  
 100 105 110  
 Val Leu Cys Pro Ile Trp Tyr Arg Cys His Arg Pro Glu His Thr Ser  
 115 120 125  
 Thr Val Met Cys Ala Val Ile Trp Val Met Ser Leu Leu Ile Ser Ile  
 130 135 140  
 Leu Asn Gly Tyr Phe Cys Asn Phe Ser Ser Pro Lys Tyr Val Asn Asn  
 145 150 155 160  
 Ser Val Cys Gln Ala Ser His Ile Phe Ile Arg Thr Tyr Pro Ile Phe  
 165 170 175  
 Leu Phe Val Leu Leu Cys Leu Ser Thr Leu Ala Leu Leu Ala Arg Leu  
 180 185 190  
 Phe Ser Gly Ala Gly Lys Arg Lys Phe Thr Arg Leu Phe Val Thr Ile  
 195 200 205  
 Met Leu Ala Ile Leu Val Phe Leu Leu Cys Gly Leu Pro Leu Gly Phe  
 210 215 220  
 Phe Trp Phe Leu Ser Pro Trp Ile Glu Asp Arg Phe Ile Val Leu Asp  
 225 230 235 240  
 Tyr Arg Leu Phe Phe Ala Ser Val Val Leu Thr Val Val Asn Ser Cys  
 245 250 255  
 Ala Asn Pro Ile Ile Tyr Phe Phe Val Gly Ser Phe Arg His Arg Leu  
 260 265 270  
 Lys Gln Gln Thr Leu Lys Met Phe Leu Gln Arg Ala Leu Gln Asp Thr  
 275 280 285  
 Pro Glu Thr Pro Glu Asn Met Val Glu Met Ser Arg Ser Lys Ala Glu  
 290 295 300  
 Pro  
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<210> 28  
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 <212> DNA  
 <213> Homo sapiens

<220>  
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 <222> (1)...(405)

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 Met Glu Thr Leu Pro Lys Val Leu Glu Val Asp Glu Lys Ser Pro Glu  
 1 5 10 15  
 gcc aag gac ctg ctg ccc agc cag acc gcc agc tcc ctg tgc atc agc 96  
 Ala Lys Asp Leu Leu Pro Ser Gln Thr Ala Ser Ser Leu Cys Ile Ser  
 20 25 30  
 tcc agg agc gag tct gtc tgg acc acc acc ccc agg agt aac tgg gaa 144

Ser Arg Ser Glu Ser Val Trp Thr Thr Thr Pro Arg Ser Asn Trp Glu  
 35 40 45

atc tac cgc aag ccc atc gtt atc atg tca gtg ggc ggt gcc atc ctg 192  
 Ile Tyr Arg Lys Pro Ile Val Ile Met Ser Val Gly Gly Ala Ile Leu  
 50 55 60

ctt ttc ggc gtg gtc atc acc tgc ttg gcc tac acc ttg aag ctg agt 240  
 Leu Phe Gly Val Val Ile Thr Cys Leu Ala Tyr Thr Leu Lys Leu Ser  
 65 70 75 80

gac aag agt ctc tcc atc ctc aaa atg gta ggg cct ggc ttc ctg tcc 288  
 Asp Lys Ser Leu Ser Ile Leu Lys Met Val Gly Pro Gly Phe Leu Ser  
 85 90 95

ctg gga ctc atg atg ctg gtg tgc ggg ctg gtg tgg gtg ccc atc atc 336  
 Leu Gly Leu Met Met Leu Val Cys Gly Leu Val Trp Val Pro Ile Ile  
 100 105 110

aaa aag aaa cag aag cac aga cag aag tgc aat ttc tta cgc agc ctc 384  
 Lys Lys Lys Gln Lys His Arg Gln Lys Ser Asn Phe Leu Arg Ser Leu  
 115 120 125

aag tcc ttc ttc ctg act cgc tga 408  
 Lys Ser Phe Phe Leu Thr Arg  
 130 135

<210> 29

<211> 135

<212> PRT

<213> Homo sapiens

<400> 29

Met Glu Thr Leu Pro Lys Val Leu Glu Val Asp Glu Lys Ser Pro Glu  
 1 5 10 15  
 Ala Lys Asp Leu Leu Pro Ser Gln Thr Ala Ser Ser Leu Cys Ile Ser  
 20 25 30  
 Ser Arg Ser Glu Ser Val Trp Thr Thr Thr Pro Arg Ser Asn Trp Glu  
 35 40 45  
 Ile Tyr Arg Lys Pro Ile Val Ile Met Ser Val Gly Gly Ala Ile Leu  
 50 55 60  
 Leu Phe Gly Val Val Ile Thr Cys Leu Ala Tyr Thr Leu Lys Leu Ser  
 65 70 75 80  
 Asp Lys Ser Leu Ser Ile Leu Lys Met Val Gly Pro Gly Phe Leu Ser  
 85 90 95  
 Leu Gly Leu Met Met Leu Val Cys Gly Leu Val Trp Val Pro Ile Ile  
 100 105 110  
 Lys Lys Lys Gln Lys His Arg Gln Lys Ser Asn Phe Leu Arg Ser Leu  
 115 120 125  
 Lys Ser Phe Phe Leu Thr Arg  
 130 135

<210> 30

<211> 1400

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (332)...(1297)

<400> 30

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ttgatcctaa tgttattccc atgttagcac agaacttgtg tggcagtaga gagaggtcag 120
gcttcagagt cagcaagaac tggatttcaa actggatttg aggaccccca ccttttgata 180
ggtagacttat tctctgtgag tctctgatct gccctcttta aatgaggaag taaatcccac 240
atggcagggt ggtggggaga atcagagatc atacagctgg tgatcacaac tggtttctgt 300
ttccagggtc accagactgg ggtttctgag c atg gat tca acc atc cca gtc 352
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Met Asp Ser Thr Ile Pro Val

1

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```
ttg ggt aca gaa ctg aca cca atc aac gga cgt gag gag act cct tgc 400
Leu Gly Thr Glu Leu Thr Pro Ile Asn Gly Arg Glu Glu Thr Pro Cys
10 15 20
```

```
tac aag cag acc ctg agc ttc acg ggg ctg acg tgc atc gtt tcc ctt 448
Tyr Lys Gln Thr Leu Ser Phe Thr Gly Leu Thr Cys Ile Val Ser Leu
25 30 35
```

```
gtc gcg ctg aca gga aac gcg gtt gtg ctc tgg ctc ctg ggc tgc cgc 496
Val Ala Leu Thr Gly Asn Ala Val Val Leu Trp Leu Leu Gly Cys Arg
40 45 50 55
```

```
atg cgc agg aac gct gtc tcc atc tac atc ctc aac ctg gtc gcg gcc 544
Met Arg Arg Asn Ala Val Ser Ile Tyr Ile Leu Asn Leu Val Ala Ala
60 65 70
```

```
gac ttc ctc ttc ctt agc ggc cac att ata tgt tgc ccg tta cgc ctc 592
Asp Phe Leu Phe Leu Ser Gly His Ile Ile Cys Ser Pro Leu Arg Leu
75 80 85
```

```
atc aat atc cgc cat ccc atc tcc aaa atc ctc agt cct gtg atg acc 640
Ile Asn Ile Arg His Pro Ile Ser Lys Ile Leu Ser Pro Val Met Thr
90 95 100
```

```
ttt ccc tac ttt ata ggc cta agc atg ctg agc gcc atc agc acc gag 688
Phe Pro Tyr Phe Ile Gly Leu Ser Met Leu Ser Ala Ile Ser Thr Glu
105 110 115
```

```
cgc tgc ctg tcc atc ctg tgg ccc atc tgg tac cac tgc cgc cgc ccc 736
Arg Cys Leu Ser Ile Leu Trp Pro Ile Trp Tyr His Cys Arg Arg Pro
120 125 130 135
```

```
aga tac ctg tca tgc gtc atg tgt gtc ctg ctc tgg gcc ctg tcc ctg 784
Arg Tyr Leu Ser Ser Val Met Cys Val Leu Leu Trp Ala Leu Ser Leu
140 145 150
```

```
ctg cgg agt atc ctg gag tgg atg ttc tgt gac ttc ctg ttt agt ggt 832
Leu Arg Ser Ile Leu Glu Trp Met Phe Cys Asp Phe Leu Phe Ser Gly
155 160 165
```

```
gct gat tct gtt tgg tgt gaa acg tca gat ttc att aca atc gcg tgg 880
```

Ala Asp Ser Val Trp Cys Glu Thr Ser Asp Phe Ile Thr Ile Ala Trp  
 170 175 180

ctg gtt ttt tta tgt gtg gtt ctc tgt ggg tcc agc ctg gtc ctg ctg 928  
 Leu Val Phe Leu Cys Val Val Leu Cys Gly Ser Ser Leu Val Leu Leu  
 185 190 195

gtc agg att ctc tgt gga tcc cgg aag atg ccg ctg acc agg ctg tac 976  
 Val Arg Ile Leu Cys Gly Ser Arg Lys Met Pro Leu Thr Arg Leu Tyr  
 200 205 210 215

gtg acc atc ctc ctc aca gtg ctg gtc ttc ctc ctc tgt ggc ctg ccc 1024  
 Val Thr Ile Leu Leu Thr Val Leu Val Phe Leu Leu Cys Gly Leu Pro  
 220 225 230

ttt ggc att cag tgg gcc ctg ttt tcc agg atc cac ctg gat tgg aaa 1072  
 Phe Gly Ile Gln Trp Ala Leu Phe Ser Arg Ile His Leu Asp Trp Lys  
 235 240 245

gtc tta ttt tgt cat gtg cat cta gtt tcc att ttc ctg tcc gct ctt 1120  
 Val Leu Phe Cys His Val His Leu Val Ser Ile Phe Leu Ser Ala Leu  
 250 255 260

aac agc agt gcc aac ccc atc att tac ttc ttc gtg ggc tcc ttt agg 1168  
 Asn Ser Ser Ala Asn Pro Ile Ile Tyr Phe Phe Val Gly Ser Phe Arg  
 265 270 275

cag cgt caa aat agg cag aac ctg aag ctg gtt ctc cag agg gct ctg 1216  
 Gln Arg Gln Asn Arg Gln Asn Leu Lys Leu Val Leu Gln Arg Ala Leu  
 280 285 290 295

cag gac acg cct gag gtg gat gaa ggt gga ggg tgg ctt cct cag gaa 1264  
 Gln Asp Thr Pro Glu Val Asp Glu Gly Gly Gly Trp Leu Pro Gln Glu  
 300 305 310

acc ctg gag ctg tcg gga agc aga ttg gag cag tgaggaagaa cctctgccct 1317  
 Thr Leu Glu Leu Ser Gly Ser Arg Leu Glu Gln  
 315 320

gtcagacagg actttgagag caatgctgcc ctgccaccct tgacaattat atgcattttt 1377  
 cttagccttc tgcctcagaa atg 1400

<210> 31  
 <211> 322  
 <212> PRT  
 <213> Homo sapiens

<400> 31  
 Met Asp Ser Thr Ile Pro Val Leu Gly Thr Glu Leu Thr Pro Ile Asn  
 1 5 10 15  
 Gly Arg Glu Glu Thr Pro Cys Tyr Lys Gln Thr Leu Ser Phe Thr Gly  
 20 25 30  
 Leu Thr Cys Ile Val Ser Leu Val Ala Leu Thr Gly Asn Ala Val Val  
 35 40 45  
 Leu Trp Leu Leu Gly Cys Arg Met Arg Arg Asn Ala Val Ser Ile Tyr  
 50 55 60  
 Ile Leu Asn Leu Val Ala Ala Asp Phe Leu Phe Leu Ser Gly His Ile

65					70					75				80	
Ile	Cys	Ser	Pro	Leu	Arg	Leu	Ile	Asn	Ile	Arg	His	Pro	Ile	Ser	Lys
				85					90					95	
Ile	Leu	Ser	Pro	Val	Met	Thr	Phe	Pro	Tyr	Phe	Ile	Gly	Leu	Ser	Met
			100					105					110		
Leu	Ser	Ala	Ile	Ser	Thr	Glu	Arg	Cys	Leu	Ser	Ile	Leu	Trp	Pro	Ile
		115					120					125			
Trp	Tyr	His	Cys	Arg	Arg	Pro	Arg	Tyr	Leu	Ser	Ser	Val	Met	Cys	Val
	130					135					140				
Leu	Leu	Trp	Ala	Leu	Ser	Leu	Leu	Arg	Ser	Ile	Leu	Glu	Trp	Met	Phe
145					150					155					160
Cys	Asp	Phe	Leu	Phe	Ser	Gly	Ala	Asp	Ser	Val	Trp	Cys	Glu	Thr	Ser
			165					170						175	
Asp	Phe	Ile	Thr	Ile	Ala	Trp	Leu	Val	Phe	Leu	Cys	Val	Val	Leu	Cys
			180					185					190		
Gly	Ser	Ser	Leu	Val	Leu	Leu	Val	Arg	Ile	Leu	Cys	Gly	Ser	Arg	Lys
		195					200					205			
Met	Pro	Leu	Thr	Arg	Leu	Tyr	Val	Thr	Ile	Leu	Leu	Thr	Val	Leu	Val
	210					215					220				
Phe	Leu	Leu	Cys	Gly	Leu	Pro	Phe	Gly	Ile	Gln	Trp	Ala	Leu	Phe	Ser
225					230					235					240
Arg	Ile	His	Leu	Asp	Trp	Lys	Val	Leu	Phe	Cys	His	Val	His	Leu	Val
			245					250						255	
Ser	Ile	Phe	Leu	Ser	Ala	Leu	Asn	Ser	Ser	Ala	Asn	Pro	Ile	Ile	Tyr
		260					265					270			
Phe	Phe	Val	Gly	Ser	Phe	Arg	Gln	Arg	Gln	Asn	Arg	Gln	Asn	Leu	Lys
		275					280					285			
Leu	Val	Leu	Gln	Arg	Ala	Leu	Gln	Asp	Thr	Pro	Glu	Val	Asp	Glu	Gly
	290					295					300				
Gly	Gly	Trp	Leu	Pro	Gln	Glu	Thr	Leu	Glu	Leu	Ser	Gly	Ser	Arg	Leu
305					310					315					320
Glu	Gln														

<210> 32  
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 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> CDS  
 <222> (433)...(1398)

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 tcatcgggtc caaagccctg gccggatgag tgggggtgtt ttgactcctaa tgttattccc 180  
 atgtcagcac agaacttgtg tggcagtaga gagatgtcag gcttcagagt caacaagaac 240  
 tggatttcaa actggatttg aggaccccca ccttttgtaa gtgacttatt atctgcgagc 300  
 ctctgtttct ctcttcttta aatgaggaca gtaaattccca tacggcaggg tgggtggggag 360  
 aatcagagat gatacagctg gtgatcacat ctggttttgt ttcccagggg caccagacta 420  
 gagtttctga gc atg gat cca acc gtc cca gtc ttc ggt aca aaa ctg aca 471  
 Met Asp Pro Thr Val Pro Val Phe Gly Thr Lys Leu Thr  
 1 5 10

cca atc aac gga cgt gag gag act cct tgc tac aat cag acc ctg agc 519



240	245	250	
tat ctg gtt tgc atg tcc ctg tcc tct cta aac agt agt gcc aac ccc			1239
Tyr Leu Val Cys Met Ser Leu Ser Ser Leu Asn Ser Ser Ala Asn Pro			
255	260	265	
atc att tac ttc ttc gtg ggc tcc ttt agg cag cgt caa aat agg cag			1287
Ile Ile Tyr Phe Phe Val Gly Ser Phe Arg Gln Arg Gln Asn Arg Gln			
270	275	280	285
aac ctg aag ctg gtt ctc cag agg gct ctg cag gac aag cct gag gtg			1335
Asn Leu Lys Leu Val Leu Gln Arg Ala Leu Gln Asp Lys Pro Glu Val			
290	295	300	
gat aaa ggt gaa ggg cag ctt cct gag gaa agc ctg gag ctg tcg gga			1383
Asp Lys Gly Glu Gly Gln Leu Pro Glu Glu Ser Leu Glu Leu Ser Gly			
305	310	315	
agc aga ttg ggg cca tgagggagag cctctgccct gtcagtcaga cgggactttg			1438
Ser Arg Leu Gly Pro			
320			

agagcaacac tgctctgccca cccttgacaa ttacatgcgt ttttcttagc gtttcgcctc	1498
agaaatgtct cagtggtaac tcaaggtctt caaataaatg tttatctaac ctgacagttg	1558
cagttttcac ccatggaaag cattagtctg acagtacaat gtttgg	1604

<210> 33  
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 <212> PRT  
 <213> Homo sapiens

<400> 33

Met Asp Pro Thr Val Pro Val Phe Gly Thr Lys Leu Thr Pro Ile Asn	
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Gly Arg Glu Glu Thr Pro Cys Tyr Asn Gln Thr Leu Ser Phe Thr Val	
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35 40 45	
Leu Trp Leu Leu Gly Tyr Arg Met Arg Arg Asn Ala Val Ser Ile Tyr	
50 55 60	
Ile Leu Asn Leu Ala Ala Asp Phe Leu Phe Leu Ser Phe Gln Ile	
65 70 75 80	
Ile Arg Ser Pro Leu Arg Leu Ile Asn Ile Ser His Leu Ile Arg Lys	
85 90 95	
Ile Leu Val Ser Val Met Thr Phe Pro Tyr Phe Thr Gly Leu Ser Met	
100 105 110	
Leu Ser Ala Ile Ser Thr Glu Arg Cys Leu Ser Val Leu Trp Pro Ile	
115 120 125	
Trp Tyr Arg Cys Arg Arg Pro Thr His Leu Ser Ala Val Val Cys Val	
130 135 140	
Leu Leu Trp Gly Leu Ser Leu Leu Phe Ser Met Leu Glu Trp Arg Phe	
145 150 155 160	
Cys Asp Phe Leu Phe Ser Gly Ala Asp Ser Ser Trp Cys Glu Thr Ser	
165 170 175	
Asp Phe Ile Pro Val Ala Trp Leu Ile Phe Leu Cys Val Val Leu Cys	
180 185 190	
Val Ser Ser Leu Val Leu Leu Val Arg Ile Leu Cys Gly Ser Arg Lys	

	195		200		205										
Met	Pro	Leu	Thr	Arg	Leu	Tyr	Val	Thr	Ile	Leu	Leu	Thr	Val	Leu	Val
	210					215					220				
Phe	Leu	Leu	Cys	Gly	Leu	Pro	Phe	Gly	Ile	Leu	Gly	Ala	Leu	Ile	Tyr
225					230					235					240
Arg	Met	His	Leu	Asn	Leu	Glu	Val	Leu	Tyr	Cys	His	Val	Tyr	Leu	Val
			245					250						255	
Cys	Met	Ser	Leu	Ser	Ser	Leu	Asn	Ser	Ser	Ala	Asn	Pro	Ile	Ile	Tyr
			260					265					270		
Phe	Phe	Val	Gly	Ser	Phe	Arg	Gln	Arg	Gln	Asn	Arg	Gln	Asn	Leu	Lys
		275					280					285			
Leu	Val	Leu	Gln	Arg	Ala	Leu	Gln	Asp	Lys	Pro	Glu	Val	Asp	Lys	Gly
	290					295					300				
Glu	Gly	Gln	Leu	Pro	Glu	Glu	Ser	Leu	Glu	Leu	Ser	Gly	Ser	Arg	Leu
305					310					315					320
Gly	Pro														

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 <212> DNA  
 <213> Homo sapiens

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 cttaggcaga gaaggtgggt gggagaaagc ttcatattc aaatgagatt cctgttatcc 180  
 acccatagat aaccagctta aagcagggtg gggctaaaag ctaatatattt cccccaacca 240  
 gataatctgc tataaacaata taaattgcat cttccagcgg ggttgcatgt tgagatccag 300  
 gacacaggtg ttgtggggag ttttgacatg cagggaagtg acccccacat gcagctgcaa 360  
 agtccttggg gtcccccaa gaaggcgggc cagacacttg gcagggaaga ggtgggaggc 420  
 agctcacggc tgggaatct ccagggcgtg ggctcgaca ggtgggaagc acctgtgggc 480  
 ggctctcaag ccccatctc attggtgcc acggtgggcg tctcccacc ttccagctcg 540  
 ggctcctgc gaagcgctg ttggagcaca gtcccaggg acctggtggg cagcctgtgg 600  
 ctctcggct gccaccagg aagtagatga cggggttggc gctgctgctt acggacgagg 660  
 agaggcgtga caagctgaag cacaggacct gcatctcggg cggcaggctc aaccagtaga 720  
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 cggcctggac catgtccacc ctgaagcacc gatcttcatt gaatttcaag aacttgctgc 960  
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 aggctgacag gtgcctgggc cgggtgacact tgaaccagat aggggaagagg acagagagac 1080  
 agcgtgggt gctgatggcc gtcagcaggc tcaggccac tgtgtaggca aagtacatca 1140  
 gtctcttcat cagctcgtgg accttgtcag tggattgac caggggctgg gtttccaggc 1200  
 tgagcgtgga agccatgctg aagaggaaga ggaggtcggc tgccgccagg ttgaggatat 1260  
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 ctgccatccc gcacaggcag gtgaacatgg ccagggagct cagcaccagg taggccgtgt 1380  
 gcaactgtct ccctctggaa tagtttaggg ctgactccac ggtcccactg ctattcaaag 1440  
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 cgggggaccc ctgggtgccc ctogaatttc cagcttcaga 1540

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 <211> 409  
 <212> PRT  
 <213> Homo sapiens

<400> 35

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Leu Ala Met Phe Thr Cys Leu Cys Gly Met Ala Gly Asn Ser Met Val  
35 40 45  
Ile Trp Leu Leu Gly Phe Arg Met His Arg Asn Pro Phe Cys Ile Tyr  
50 55 60  
Ile Leu Asn Leu Ala Ala Asp Leu Leu Phe Leu Phe Ser Met Ala  
65 70 75 80  
Ser Thr Leu Ser Leu Glu Thr Gln Pro Leu Val Asn Thr Thr Asp Lys  
85 90 95  
Val His Glu Leu Met Lys Arg Leu Met Tyr Phe Ala Tyr Thr Val Gly  
100 105 110  
Leu Ser Leu Leu Thr Ala Ile Ser Thr Gln Arg Cys Leu Ser Val Leu  
115 120 125  
Phe Pro Ile Trp Phe Lys Cys His Arg Pro Arg His Leu Ser Ala Trp  
130 135 140  
Val Cys Gly Leu Leu Trp Thr Leu Cys Leu Leu Met Asn Gly Leu Thr  
145 150 155 160  
Ser Ser Phe Cys Ser Lys Phe Leu Lys Phe Asn Glu Asp Arg Cys Phe  
165 170 175  
Arg Val Asp Met Val Gln Ala Ala Leu Ile Met Gly Val Leu Thr Pro  
180 185 190  
Val Met Thr Leu Ser Ser Leu Thr Leu Phe Val Trp Val Arg Arg Ser  
195 200 205  
Ser Gln Gln Trp Arg Arg Gln Pro Thr Arg Leu Phe Val Val Val Leu  
210 215 220  
Ala Ser Val Leu Val Phe Leu Ile Cys Ser Leu Pro Leu Ser Ile Tyr  
225 230 235 240  
Trp Phe Val Leu Tyr Trp Leu Ser Leu Pro Pro Glu Met Gln Val Leu  
245 250 255  
Cys Phe Ser Leu Ser Arg Leu Ser Ser Ser Val Ser Ser Ser Ala Asn  
260 265 270  
Pro Val Ile Tyr Phe Leu Val Gly Ser Arg Arg Ala Thr Gly Cys Pro  
275 280 285  
Pro Gly Pro Trp Gly Leu Cys Ser Asn Arg Arg Phe Ala Arg Ser Pro  
290 295 300  
Ser Trp Lys Val Gly Arg Arg Pro Pro Trp Ala Pro Met Arg Trp Gly  
305 310 315 320  
Leu Glu Ser Arg Pro Gln Val Leu Pro Thr Cys Ala Ser Pro Cys Pro  
325 330 335  
Gly Asp Ser Arg Ala Val Ser Cys Leu Pro Pro Arg Pro Cys Gln Val  
340 345 350  
Ser Gly Pro Pro Ser Trp Gly Ser Pro Lys Asp Phe Ala Ala Ala Cys  
355 360 365  
Gly Gly His Phe Pro Ala Cys Gln Asn Ser Pro Gln His Leu Cys Pro  
370 375 380  
Gly Ser His Asn Ala Thr Pro Leu Glu Asp Ala Ile Tyr Leu Phe Ile  
385 390 395 400  
Ala Asp Tyr Leu Val Gly Gly Lys Tyr  
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<210> 36

<211> 767

<212> DNA  
<213> Homo sapiens

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ccg ggc ttc gtg cag acc agc ctg gca acg ctg cgc ttc ttc tgc tac 97  
Pro Gly Phe Val Gln Thr Ser Leu Ala Thr Leu Arg Phe Phe Cys Tyr  
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atc gtg ggc ctg agt ctc ctg gcg gcc gtc agc gtg gag cag tgc ctg 145  
Ile Val Gly Leu Ser Leu Leu Ala Ala Val Ser Val Glu Gln Cys Leu  
35 40 45

gcc gcc ctc ttc cca gcc tgg tac tcg tgc cgc cgc cca cgc cac ctg 193  
Ala Ala Leu Phe Pro Ala Trp Tyr Ser Cys Arg Arg Pro Arg His Leu  
50 55 60

acc acc tgt gtg tgc gcc ctc acc tgg gcc ctc tgc ctg ctg ctg cac 241  
Thr Thr Cys Val Cys Ala Leu Thr Trp Ala Leu Cys Leu Leu Leu His  
65 70 75 80

ctg ctg ctc agc agc gcc tgc acc cag ttc ttc ggg gag ccc agc cgc 289  
Leu Leu Leu Ser Ser Ala Cys Thr Gln Phe Phe Gly Glu Pro Ser Arg  
85 90 95

cac ttg tgc cgg acg ctg tgg ctg gtg gca gcg gtg ctg ctg gct ctg 337  
His Leu Cys Arg Thr Leu Trp Leu Val Ala Ala Val Leu Leu Ala Leu  
100 105 110

ctg tgt tgc acc atg tgt ggg gcc agc ctt atg ctg ctg ctg cgg gtg 385  
Leu Cys Cys Thr Met Cys Gly Ala Ser Leu Met Leu Leu Leu Arg Val  
115 120 125

gag cga ggc ccc cag cgg ccc cca ccc cgg gcc ttc cct ggg ctc atc 433  
Glu Arg Gly Pro Gln Arg Pro Pro Pro Arg Gly Phe Pro Gly Leu Ile  
130 135 140

ctc ctc acc gtc ctc ctc ttc ctc ttc tgc ggc ctg ccc ttc ggc atc 481  
Leu Leu Thr Val Leu Leu Phe Leu Phe Cys Gly Leu Pro Phe Gly Ile  
145 150 155 160

tac tgg ctg tcc cgg aac ctg ctc tgg tac atc ccc cac tac ttc tac 529  
Tyr Trp Leu Ser Arg Asn Leu Leu Trp Tyr Ile Pro His Tyr Phe Tyr  
165 170 175

cac ttc agc ttc ctc atg gcc gcc gtg cac tgc gcg gcc aag ccc gtc 577  
His Phe Ser Phe Leu Met Ala Ala Val His Cys Ala Ala Lys Pro Val  
180 185 190

gtc tac ttc tgc ctg ggc agt gcc cag ggc cgc agg ctg ccc ctc cgg 625

Val Tyr Phe Cys Leu Gly Ser Ala Gln Gly Arg Arg Leu Pro Leu Arg  
195 200 205

ctg gtc ctc cag cga gcg ctg gga gac gag gct gag ctg ggg gcc gtc 673  
Leu Val Leu Gln Arg Ala Leu Gly Asp Glu Ala Glu Leu Gly Ala Val  
210 215 220

agg gag acc tcc cgc cgg ggc ctg gtg gac ata gca gcc tga g 716  
Arg Glu Thr Ser Arg Arg Gly Leu Val Asp Ile Ala Ala \*  
225 230 235

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<212> PRT  
<213> Homo sapiens

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Ile Val Gly Leu Ser Leu Leu Ala Val Ser Val Glu Gln Cys Leu  
35 40 45  
Ala Ala Leu Phe Pro Ala Trp Tyr Ser Cys Arg Arg Pro Arg His Leu  
50 55 60  
Thr Thr Cys Val Cys Ala Leu Thr Trp Ala Leu Cys Leu Leu Leu His  
65 70 75 80  
Leu Leu Leu Ser Ser Ala Cys Thr Gln Phe Phe Gly Glu Pro Ser Arg  
85 90 95  
His Leu Cys Arg Thr Leu Trp Leu Val Ala Ala Val Leu Leu Ala Leu  
100 105 110  
Leu Cys Cys Thr Met Cys Gly Ala Ser Leu Met Leu Leu Leu Arg Val  
115 120 125  
Glu Arg Gly Pro Gln Arg Pro Pro Pro Arg Gly Phe Pro Gly Leu Ile  
130 135 140  
Leu Leu Thr Val Leu Leu Phe Leu Phe Cys Gly Leu Pro Phe Gly Ile  
145 150 155 160  
Tyr Trp Leu Ser Arg Asn Leu Leu Trp Tyr Ile Pro His Tyr Phe Tyr  
165 170 175  
His Phe Ser Phe Leu Met Ala Ala Val His Cys Ala Ala Lys Pro Val  
180 185 190  
Val Tyr Phe Cys Leu Gly Ser Ala Gln Gly Arg Arg Leu Pro Leu Arg  
195 200 205  
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210 215 220  
Arg Glu Thr Ser Arg Arg Gly Leu Val Asp Ile Ala Ala  
225 230 235

<210> 38  
<211> 1361  
<212> DNA  
<213> Mus musculus

<220>

<221> CDS

<222> (48)...(1064)

<400> 38

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gtc atc caa gac tgg acc att aat att aca gca ctg aaa gaa agc aat 104
Val Ile Gln Asp Trp Thr Ile Asn Ile Thr Ala Leu Lys Glu Ser Asn
      5              10              15

gac aat gga ata tca ttt tgt gaa gtt gtg tct cgt acc atg act ttt 152
Asp Asn Gly Ile Ser Phe Cys Glu Val Val Ser Arg Thr Met Thr Phe
      20              25              30              35

ctt tcc ctc atc att gcc tta gtt ggg ctg gtt gga aat gcc aca gtg 200
Leu Ser Leu Ile Ile Ala Leu Val Gly Leu Val Gly Asn Ala Thr Val
              40              45              50

tta tgg ttt ctg ggc ttc cag atg agc agg aat gcc ttc tct gtc tac 248
Leu Trp Phe Leu Gly Phe Gln Met Ser Arg Asn Ala Phe Ser Val Tyr
              55              60              65

atc ctc aac ctt gct ggt gct gac ttt gtc ttc atg tgc ttt caa att 296
Ile Leu Asn Leu Ala Gly Ala Asp Phe Val Phe Met Cys Phe Gln Ile
              70              75              80

gta cat tgt ttt tat att atc tta gac atc tac ttc atc ccc act aat 344
Val His Cys Phe Tyr Ile Ile Leu Asp Ile Tyr Phe Ile Pro Thr Asn
      85              90              95

ttt ttt tca tct tac act atg gtg tta aac att gct tac ctt agt ggt 392
Phe Phe Ser Ser Tyr Thr Met Val Leu Asn Ile Ala Tyr Leu Ser Gly
      100              105              110              115

ctg agc atc ctc act gtc att agc act gaa cgc ttc cta tct gtc atg 440
Leu Ser Ile Leu Thr Val Ile Ser Thr Glu Arg Phe Leu Ser Val Met
              120              125              130

tgg ccc atc tgg tac cgc tgc caa cgc cca agg cac aca tca gct gtc 488
Trp Pro Ile Trp Tyr Arg Cys Gln Arg Pro Arg His Thr Ser Ala Val
              135              140              145

ata tgt act gtg ctt tgg gtc ttg tcc ctg gtg ttg agc ctc ctg gaa 536
Ile Cys Thr Val Leu Trp Val Leu Ser Leu Val Leu Ser Leu Leu Glu
              150              155              160

gga aag gaa tgt ggc ttc cta tat tac act agt ggc cct ggt ttg tgt 584
Gly Lys Glu Cys Gly Phe Leu Tyr Tyr Thr Ser Gly Pro Gly Leu Cys
      165              170              175

aag aca ttt gat tta atc act act gca tgg tta att gtt tta ttt gtg 632
Lys Thr Phe Asp Leu Ile Thr Thr Ala Trp Leu Ile Val Leu Phe Val
      180              185              190              195

gtt ctc ttg gga tcc agt ctg gcc ttg gtg ctt acc atc ttc tgt ggc 680
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Val Leu Leu Gly Ser Ser Leu Ala Leu Val Leu Thr Ile Phe Cys Gly  
200 205 210

tta cac aag gtt cct gtg acc agg ttg tat gtg acc att gtg ttt aca 728  
Leu His Lys Val Pro Val Thr Arg Leu Tyr Val Thr Ile Val Phe Thr  
215 220 225

gtg ctt gtc ttc ctg atc ttt ggt ctg ccc tat ggg atc tac tgg ttc 776  
Val Leu Val Phe Leu Ile Phe Gly Leu Pro Tyr Gly Ile Tyr Trp Phe  
230 235 240

ctc tta gag tgg att agg gaa ttt cat gat aat aaa cct tgt ggt ttt 824  
Leu Leu Glu Trp Ile Arg Glu Phe His Asp Asn Lys Pro Cys Gly Phe  
245 250 255

cgt aac gtg aca ata ttt ctg tcc tgt att aac agc tgt gcc aac ccc 872  
Arg Asn Val Thr Ile Phe Leu Ser Cys Ile Asn Ser Cys Ala Asn Pro  
260 265 270 275

atc att tac ttc ctt gtt ggc tcc att agg cac cat cgg ttt caa cgg 920  
Ile Ile Tyr Phe Leu Val Gly Ser Ile Arg His His Arg Phe Gln Arg  
280 285 290

aag act ctc aag ctt ctt ctg cag aga gcc atg caa gac tct cct gag 968  
Lys Thr Leu Lys Leu Leu Leu Gln Arg Ala Met Gln Asp Ser Pro Glu  
295 300 305

gag gaa gaa tgt gga gag atg ggt tcc tca aga aga cct aga gaa ata 1016  
Glu Glu Glu Cys Gly Glu Met Gly Ser Ser Arg Arg Pro Arg Glu Ile  
310 315 320

aaa act gtc tgg aag gga ctg aga gct gct ttg atc agg cat aaa tag 1064  
Lys Thr Val Trp Lys Gly Leu Arg Ala Ala Leu Ile Arg His Lys \*  
325 330 335

ctttgaagag aactatgttt ttatcacttt gtggcatttt cataatgttg tttagttgat 1124  
gaccaaggt taactcagtt ggggaagtag tcaatgttgt agaagttgat tgatattgaa 1184  
cttggtataa atactgagta cagtattttt gcagctatct tgctcagagc tttaccaact 1244  
ccatttgatg ggactcctta taagctctat ggggtccagg agaggtgttg accacaattg 1304  
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<210> 39

<211> 338

<212> PRT

<213> Mus musculus

<400> 39

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20 25 30  
Met Thr Phe Leu Ser Leu Ile Ile Ala Leu Val Gly Leu Val Gly Asn  
35 40 45  
Ala Thr Val Leu Trp Phe Leu Gly Phe Gln Met Ser Arg Asn Ala Phe  
50 55 60  
Ser Val Tyr Ile Leu Asn Leu Ala Gly Ala Asp Phe Val Phe Met Cys  
65 70 75 80

Phe	Gln	Ile	Val	His	Cys	Phe	Tyr	Ile	Ile	Leu	Asp	Ile	Tyr	Phe	Ile	
				85					90						95	
Pro	Thr	Asn	Phe	Phe	Ser	Ser	Tyr	Thr	Met	Val	Leu	Asn	Ile	Ala	Tyr	
			100					105					110			
Leu	Ser	Gly	Leu	Ser	Ile	Leu	Thr	Val	Ile	Ser	Thr	Glu	Arg	Phe	Leu	
		115					120					125				
Ser	Val	Met	Trp	Pro	Ile	Trp	Tyr	Arg	Cys	Gln	Arg	Pro	Arg	His	Thr	
	130					135					140					
Ser	Ala	Val	Ile	Cys	Thr	Val	Leu	Trp	Val	Leu	Ser	Leu	Val	Leu	Ser	
	145				150					155					160	
Leu	Leu	Glu	Gly	Lys	Glu	Cys	Gly	Phe	Leu	Tyr	Tyr	Thr	Ser	Gly	Pro	
			165						170					175		
Gly	Leu	Cys	Lys	Thr	Phe	Asp	Leu	Ile	Thr	Thr	Ala	Trp	Leu	Ile	Val	
			180					185					190			
Leu	Phe	Val	Val	Leu	Leu	Gly	Ser	Ser	Leu	Ala	Leu	Val	Leu	Thr	Ile	
	195						200					205				
Phe	Cys	Gly	Leu	His	Lys	Val	Pro	Val	Thr	Arg	Leu	Tyr	Val	Thr	Ile	
	210					215					220					
Val	Phe	Thr	Val	Leu	Val	Phe	Leu	Ile	Phe	Gly	Leu	Pro	Tyr	Gly	Ile	
	225				230					235					240	
Tyr	Trp	Phe	Leu	Leu	Glu	Trp	Ile	Arg	Glu	Phe	His	Asp	Asn	Lys	Pro	
			245						250					255		
Cys	Gly	Phe	Arg	Asn	Val	Thr	Ile	Phe	Leu	Ser	Cys	Ile	Asn	Ser	Cys	
		260						265					270			
Ala	Asn	Pro	Ile	Ile	Tyr	Phe	Leu	Val	Gly	Ser	Ile	Arg	His	His	Arg	
	275						280					285				
Phe	Gln	Arg	Lys	Thr	Leu	Lys	Leu	Leu	Leu	Gln	Arg	Ala	Met	Gln	Asp	
	290					295					300					
Ser	Pro	Glu	Glu	Glu	Glu	Cys	Gly	Glu	Met	Gly	Ser	Ser	Arg	Arg	Pro	
	305				310					315					320	
Arg	Glu	Ile	Lys	Thr	Val	Trp	Lys	Gly	Leu	Arg	Ala	Ala	Leu	Ile	Arg	
			325					330						335		

His Lys

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 <211> 1278  
 <212> DNA  
 <213> Mus musculus

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 ccatcatcat ttccctgggt gggatgggac taaatgcat agtgctgtgg ttccctgggca 180  
 tccgtatgca cacgaatgcc ttcactgtct acattctcaa cctggctatg gctgactttc 240  
 ttacactgtg ctctcagttt gtaatttgtc ttcttattgc cttttatata ttctactcaa 300  
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 tgagcattct cagcaccatt agcattgagc gctgcttgtc tgtaatatgg cccatttggt 420  
 atcgctgtaa acgtccaaga cacacatcag ctatcacatg ttttgtgctt tgggttatgt 480  
 ccttattgtt gggctctcctg gaagggaagg catgtggctt actgtttaat agctttgact 540  
 cttattgggt tgaaacattt gatgttatca ctaatatatg gtcagttgtt ttttttggtg 600  
 ttctctgtgg gtctagcctc accctgcttg tcaggatctt ctgtggctca cagcgaattc 660  
 ctatgaccag gctgtatgtg actattacac tcacagtctt ggtcttctct atcttttggtc 720  
 ttcccttttg gatctattgg atactctatc agtggattag caatttttat tatgttgaaa 780  
 tttgtaattt ttatcttgag atactattcc tatcctgtgt taacagctgt atgaacccca 840  
 tcatttattt ccttggttggc tccattaggc accgaaggtt caggcggaag actctcaagc 900

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tacttctgca gagagccatg caagacaccc ctgaggagga acaaagtgga aataagagtt 960
cttcagaaca ccctgaagaa ctggaaactg ttcagagctg cagctgacaa ctgcttgatc 1020
agacaaaaat ggttttgatg gaaatacttt ttcttatccg tgtggacat ttttacaacc 1080
tttattcagt ttgttatctc atcttcaatt gtttaattag gacaataatt tttgtaaaag 1140
ttgagagaaa tgggtcttgt catactaata ctgaatgtag catttctgaa gctgtgttac 1200
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<210> 41

<211> 338

<212> PRT

<213> Mus musculus

<400> 41

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 20           25           30
Cys Val Thr Arg Asn Gln Ala Met Ile Leu Leu Ser Ile Ile Ile Ser
 35           40           45
Leu Val Gly Met Gly Leu Asn Ala Ile Val Leu Trp Phe Leu Gly Ile
 50           55           60
Arg Met His Thr Asn Ala Phe Thr Val Tyr Ile Leu Asn Leu Ala Met
 65           70           75           80
Ala Asp Phe Leu Tyr Leu Cys Ser Gln Phe Val Ile Cys Leu Leu Ile
 85           90           95
Ala Phe Tyr Ile Phe Tyr Ser Ile Asp Ile Asn Ile Pro Leu Val Leu
100           105           110
Tyr Val Val Pro Ile Phe Ala Tyr Leu Ser Gly Leu Ser Ile Leu Ser
115           120           125
Thr Ile Ser Ile Glu Arg Cys Leu Ser Val Ile Trp Pro Ile Trp Tyr
130           135           140
Arg Cys Lys Arg Pro Arg His Thr Ser Ala Ile Thr Cys Phe Val Leu
145           150           155           160
Trp Val Met Ser Leu Leu Leu Gly Leu Leu Glu Gly Lys Ala Cys Gly
165           170           175
Leu Leu Phe Asn Ser Phe Asp Ser Tyr Trp Cys Glu Thr Phe Asp Val
180           185           190
Ile Thr Asn Ile Trp Ser Val Val Phe Phe Gly Val Leu Cys Gly Ser
195           200           205
Ser Leu Thr Leu Leu Val Arg Ile Phe Cys Gly Ser Gln Arg Ile Pro
210           215           220
Met Thr Arg Leu Tyr Val Thr Ile Thr Leu Thr Val Leu Val Phe Leu
225           230           235           240
Ile Phe Gly Leu Pro Phe Gly Ile Tyr Trp Ile Leu Tyr Gln Trp Ile
245           250           255
Ser Asn Phe Tyr Tyr Val Glu Ile Cys Asn Phe Tyr Leu Glu Ile Leu
260           265           270
Phe Leu Ser Cys Val Asn Ser Cys Met Asn Pro Ile Ile Tyr Phe Leu
275           280           285
Val Gly Ser Ile Arg His Arg Arg Phe Arg Arg Lys Thr Leu Lys Leu
290           295           300
Leu Leu Gln Arg Ala Met Gln Asp Thr Pro Glu Glu Glu Gln Ser Gly
305           310           315           320
Asn Lys Ser Ser Ser Glu His Pro Glu Glu Leu Glu Thr Val Gln Ser
325           330           335
Cys Ser
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<211> 1009  
<212> DNA  
<213> Mus musculus

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ttcccctggt gggatggtag tgaatatcat agtgctgtgg ttccctgggt tccagatatg 180  
caggaatgcc ttctctgcct acatcctcaa cctggctgtg gotgatattt tcttctctgt 240  
ttctcattct atattttctt ttcttattgt ctgcaaactg cactattttt tattctacat 300  
tagacagctt ttggatactg tgacaatggt tgcttatggt ttgggctga gcattaccac 360  
catcattagc attgagtgtc gcctgtctat catgtggccc atctgggtat actgccaacg 420  
tccaagacac acatcagctg tcatttgtgt cttgctttgg gctctatctc tgctgtttcc 480  
tgctctgcag atggaaaaat gtgacgtcct gtttaatact ttggaatatt cttgggtgtg 540  
gataatcaat ataactctct gtgcatggtt agttgtttta ttgtgtggtc tctgtgggtt 600  
cagcctcatc ctgctcctca ggatctcctg tggatcacag cagattcctg tgaccagggt 660  
gaatgtaact attgcaactc gagtgctact cctcctgatc ttgggtattc cctttgggat 720  
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acatcatata ctatacgtat actgtattaa catctgtgtc aatgctacca tatacttctc 840  
tgttgggtcc attaggcatg gcaagtttca gaagatgact ctgaagctga ttctgcagag 900  
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<210> 43  
<211> 312  
<212> PRT  
<213> Mus musculus

<400> 43  
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Leu Ser Ile Thr Ile Ser Pro Val Gly Met Val Leu Asn Ile Ile Val  
35 40 45  
Leu Trp Phe Leu Gly Phe Gln Ile Cys Arg Asn Ala Phe Ser Ala Tyr  
50 55 60  
Ile Leu Asn Leu Ala Val Ala Asp Phe Leu Phe Leu Cys Ser His Ser  
65 70 75 80  
Ile Phe Ser Phe Leu Ile Val Cys Lys Leu His Tyr Phe Leu Phe Tyr  
85 90 95  
Ile Arg Gln Leu Leu Asp Thr Val Thr Met Phe Ala Tyr Val Phe Gly  
100 105 110  
Leu Ser Ile Thr Thr Ile Ile Ser Ile Glu Cys Cys Leu Ser Ile Met  
115 120 125  
Trp Pro Ile Trp Tyr His Cys Gln Arg Pro Arg His Thr Ser Ala Val  
130 135 140  
Ile Cys Val Leu Leu Trp Ala Leu Ser Leu Leu Phe Pro Ala Leu Gln  
145 150 155 160  
Met Glu Lys Cys Ser Val Leu Phe Asn Thr Phe Glu Tyr Ser Trp Cys  
165 170 175  
Gly Ile Ile Asn Ile Ile Ser Gly Ala Trp Leu Val Val Leu Phe Val  
180 185 190

Val	Leu	Cys	Gly	Phe	Ser	Leu	Ile	Leu	Leu	Leu	Arg	Ile	Ser	Cys	Gly	
	195						200					205				
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225					230					235					240	
Val	Asp	Lys	Trp	Asn	Glu	Glu	Asn	Phe	Phe	Val	Arg	Ala	Cys	Gly	Phe	
			245					250						255		
Ser	His	His	Ile	Leu	Tyr	Val	Tyr	Cys	Ile	Asn	Ile	Cys	Val	Asn	Ala	
			260					265					270			
Thr	Ile	Tyr	Phe	Leu	Val	Gly	Ser	Ile	Arg	His	Gly	Lys	Phe	Gln	Lys	
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Met	Thr	Leu	Lys	Leu	Ile	Leu	Gln	Arg	Ala	Ile	Gln	Gly	Thr	Pro	Glu	
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<210> 44  
 <211> 1219  
 <212> DNA  
 <213> Mus musculus

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 ctgtctatgt cctcaatctg gctgggtgctg atttcttgta ccttttcaact caagttgtgc 360  
 attccctgga atgtgtcctt cagttagata ataactcctt ttatattctc ctcatgttaa 420  
 caatgtttgc ttaccttgca ggtttgtgta tgattgcagc catcagtgct gaacgctgcc 480  
 tatctgttat gtggcctatc tgggtatcact gccaaagacc aagacacaca tcagccatca 540  
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 gggtgcgatg gcagtctctg aagctacttc ttcagagagc catgcaggac actcctgagg 1020  
 aagagagtgg agagaggggt ccttcgcaaa ggtctgggga actggaaaca gtctagtaca 1080  
 gtagttgagt gagtccctgg tcaaacatag tttctgtgag agtcaatttt gcctttatct 1140  
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 aggagaaatg agcttggtta 1219

<210> 45  
 <211> 321  
 <212> PRT  
 <213> Mus musculus

<400> 45  
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 20 25 30  
 Asn Phe Leu Thr Val Ile Ile Ala Val Val Gly Leu Ala Gly Asn Gly



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ggttctatgt gaccattgct ctcacattgg tgggtcttcat attcttgggt ctgccctttg 780
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<210> 47

<211> 322

<212> PRT

<213> Mus musculus

<400> 47

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          20          25          30
Leu Asn Phe Leu Thr Val Ile Ile Ala Met Phe Gly Leu Ala Gly Asn
          35          40          45
Ala Ile Val Leu Trp Leu Leu Ala Phe His Leu Pro Arg Asn Ala Phe
          50          55          60
Ser Val Tyr Val Cys Asn Leu Ala Cys Ala Asp Phe Leu Gln Leu Cys
  65          70          75          80
Thr Gln Ile Leu Gly Ser Leu Glu Cys Phe Leu Gln Leu Asn Arg Arg
          85          90          95
His Thr Phe Phe Leu Thr Val Val Phe Met Phe Ala Tyr Leu Ala Gly
          100          105          110
Leu Cys Met Ile Ala Ala Ile Ser Val Glu Arg Ser Leu Ser Val Met
          115          120          125
Trp Pro Ile Trp Tyr His Cys Gln Arg Pro Arg His Thr Ser Ser Ile
          130          135          140
Met Cys Ala Leu Leu Trp Ala Phe Cys Leu Leu Leu Asn Phe Leu Leu
          145          150          155          160
Gly Glu Gly Cys Gly Leu Leu Phe Ser Asp Pro Lys Tyr Tyr Phe Cys
          165          170          175
Ile Thr Cys Ala Leu Ile Thr Thr Ala Leu Ile Ile Leu Leu Thr Val
          180          185          190
Val Pro Ser Val Ser Ser Leu Ala Leu Leu Val Lys Met Ile Cys Gly
          195          200          205
Ser His Arg Ile Pro Val Thr Arg Phe Tyr Val Thr Ile Ala Leu Thr
          210          215          220
Leu Val Val Phe Ile Phe Leu Gly Leu Pro Phe Gly Ile Tyr Ser Ser
          225          230          235          240
Phe Leu Ile Met Phe Lys Glu Phe Gln Ser Ile Phe Ser Tyr His Val
          245          250          255
Leu Glu Val Thr Ile Phe Leu Ser Cys Val Asn Ser Cys Ala Asn Pro
          260          265          270
Ile Ile Tyr Phe Leu Val Gly Ser Ile Arg Gln His Arg Leu Gln Trp
          275          280          285
Gln Ser Leu Lys Leu Leu Leu Gln Arg Ala Met Gln Asp Thr Pro Glu
          290          295          300
Glu Asp Ser Gly Glu Arg Val Pro Ser Gln Arg Ser Gly Glu Leu Glu
          305          310          315          320

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Ser Val

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<211> 1280  
<212> DNA  
<213> Mus musculus

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acctggatct actttttcagt gacattcctc gccatggcca cgtgtgtggg ggggggatggc 180  
aggcaactca ttggtgattt ggctcctgag ctgcaatggc atgcagaggt ctcccttctg 240  
tgtctatgtg ctcaacctgg cgggtggtga cttcctcttc ttattctgca tggcctccat 300  
gctcagcctg gaaacagggc ccctgctcat agtcaacatt tctgccaaaa tctatgaagg 360  
gatgaggaga atcaagtact ttgcctatac agcaggcctg agcctgctga cagccatcag 420  
caccacgcgc tgectctccg tgcttttccc catctgggtat aagtgccacc ggccccggca 480  
cctgtcatca gtggtatctg gtgcactctg ggactggcc ttcctgatga acttcctggc 540  
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tgttttcaac agtcttatcc tggggatctt catgccggtc atgatcctga ccagcaccat 660  
cctcttcatc cgggtgcgga agaacagcct gatgcagaga cggcgccccc ggcggtgtga 720  
cgtggtcatc ctgacttcca tccttgtctt cctcacctgt tctctgccct tgggcatcaa 780  
ctggttctta ctctactggg tggatgtgaa acgggatgtg aggctacttt atagctgctg 840  
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aaggagagccc aaccaggaac tcctccaaag cccacccag cccttcctta aaagtaccca 1080  
gcaagcctgc aatgcaaagg ccttgacact caaaatgttt gggtcacggt cctctctgcc 1140  
agggagggtt caccactatc accttgtgtt cctaactctaa actaagaggt gaggcaatat 1200  
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<210> 49  
<211> 281  
<212> PRT  
<213> Mus musculus

<400> 49  
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Phe Leu Phe Leu Phe Cys Met Ala Ser Met Leu Ser Leu Glu Thr Gly  
35 40 45  
Pro Leu Leu Ile Val Asn Ile Ser Ala Lys Ile Tyr Glu Gly Met Arg  
50 55 60  
Arg Ile Lys Tyr Phe Ala Tyr Thr Ala Gly Leu Ser Leu Leu Thr Ala  
65 70 75 80  
Ile Ser Thr Gln Arg Cys Leu Ser Val Leu Phe Pro Ile Trp Tyr Lys  
85 90 95  
Cys His Arg Pro Arg His Leu Ser Ser Val Val Ser Gly Ala Leu Trp  
100 105 110  
Ala Leu Ala Phe Leu Met Asn Phe Leu Ala Ser Phe Phe Cys Val Gln  
115 120 125  
Phe Trp His Pro Asn Lys His Gln Cys Phe Lys Val Asp Ile Val Phe  
130 135 140

Asn	Ser	Leu	Ile	Leu	Gly	Ile	Phe	Met	Pro	Val	Met	Ile	Leu	Thr	Ser
145					150					155					160
Thr	Ile	Leu	Phe	Ile	Arg	Val	Arg	Lys	Asn	Ser	Leu	Met	Gln	Arg	Arg
			165						170					175	
Arg	Pro	Arg	Arg	Leu	Tyr	Val	Val	Ile	Leu	Thr	Ser	Ile	Leu	Val	Phe
			180					185					190		
Leu	Thr	Cys	Ser	Leu	Pro	Leu	Gly	Ile	Asn	Trp	Phe	Leu	Leu	Tyr	Trp
		195					200					205			
Val	Asp	Val	Lys	Arg	Asp	Val	Arg	Leu	Leu	Tyr	Ser	Cys	Val	Ser	Arg
	210					215					220				
Phe	Ser	Ser	Ser	Leu	Ser	Ser	Ala	Asn	Pro	Val	Ile	Tyr	Phe	Leu	
225					230				235					240	
Val	Gly	Ser	Gln	Lys	Ser	His	Arg	Leu	Gln	Glu	Ser	Leu	Gly	Ala	Val
			245						250					255	
Leu	Gly	Arg	Ala	Leu	Arg	Asp	Glu	Pro	Glu	Pro	Glu	Gly	Arg	Glu	Thr
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 <211> 1170  
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 ggctgctggg caatggagtg gccctctggc tgc tcaacca aaatgtctac aggaaccct 180  
 tctccatcta tctcttgat gtggcctgcg ccgacctcat cttcctctgc tgccacatgg 240  
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 <212> PRT  
 <213> Mus musculus

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 Met Leu Arg Phe Phe Cys Tyr Ile Val Gly Leu Ser Leu Leu Ala Ala  
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 Ile Ser Thr Glu Gln Cys Leu Ala Thr Leu Phe Pro Ala Trp Tyr Leu  
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 Cys Arg Arg Pro Arg Tyr Leu Thr Thr Cys Val Cys Ala Leu Ile Trp  
 130 135 140  
 Val Leu Cys Leu Leu Leu Asp Leu Leu Leu Ser Gly Ala Cys Thr Gln  
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 Phe Phe Gly Ala Pro Ser Tyr His Leu Cys Asp Met Leu Trp Leu Val  
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 Val Ala Val Leu Leu Ala Ala Leu Cys Cys Thr Met Cys Val Thr Ser  
 180 185 190  
 Leu Leu Leu Leu Leu Arg Val Glu Arg Gly Pro Glu Arg His Gln Pro  
 195 200 205  
 Arg Gly Phe Pro Thr Leu Val Leu Leu Ala Val Leu Leu Phe Leu Phe  
 210 215 220  
 Cys Gly Leu Pro Phe Gly Ile Phe Trp Leu Ser Lys Asn Leu Ser Trp  
 225 230 235 240  
 His Ile Pro Leu Tyr Phe Tyr His Phe Ser Phe Phe Met Ala Ser Val  
 245 250 255  
 His Ser Ala Ala Lys Pro Ala Ile Tyr Phe Phe Leu Gly Ser Thr Pro  
 260 265 270  
 Gly Gln Arg Phe Arg Glu Pro Leu Arg Leu Val Leu Gln Arg Ala Leu  
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<210> 52  
 <211> 1519  
 <212> DNA  
 <213> Mus musculus

<400> 52  
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 ttttggtttt tctcctctgc gggttgccct gtggcttata ctggttctg ttattctgga 780

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<212> PRT

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<400> 53

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Gln Leu Leu Lys Val Ser Tyr Leu Asn Ile Ile Phe Leu Tyr Arg Phe  
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Val	Tyr	Ile	Leu	Asn	Leu	Ala	Leu	Ala	Asp	Phe	Leu	Phe	Leu	Leu	Cys
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Ala	Gly	Leu	Ser	Ile	Leu	Ser	Ala	Ile	Gly	Thr	Glu	Arg	Cys	Leu	Ser
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Leu	Phe	Val	Val	Leu	Cys	Leu	Ser	Ser	Leu	Ala	Leu	Leu	Ala	Arg	Leu
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Phe	Cys	Gly	Ala	Gly	Arg	Met	Lys	Leu	Thr	Arg	Leu	Tyr	Val	Thr	Ile
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 agataaccag atggcaagag gcaagggcaa aaatataagc aatgggaacc aagactattt 1980  
 ggcacatca gaacctagtt ctctcaacat ggtgagccat ggctactcca acagacaaga 2040  
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 gatgatgatg 2110

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<210> 59  
 <211> 305  
 <212> PRT  
 <213> Mus musculus

<400> 59

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Asn Leu Met Ile Ile Ile Phe Gly Leu Val Gly Leu Thr Gly Asn Gly
 20          25          30
Ile Val Phe Trp Leu Leu Gly Phe Arg Met His Arg Asn Ala Phe Leu
 35          40          45
Val Tyr Ile Leu Asn Leu Ala Leu Ala Asp Phe Leu Phe Leu Leu Cys
 50          55          60
His Ile Ile Asn Ser Thr Met Leu Leu Leu Lys Val Leu Pro Pro Thr
 65          70          75          80
Gly Ser Leu Phe His Cys Phe Asn Thr Ile Arg Thr Val Leu Tyr Ile
 85          90          95
Thr Gly Leu Ser Met Leu Ser Ala Ile Ser Thr Glu Arg Cys Leu Ser
 100          105          110
Val Leu Cys Pro Ile Trp Tyr Arg Cys Arg Arg Arg Glu Asn Thr Ser
 115          120          125
Ala Val Met Cys Ala Val Ile Trp Val Leu Ser Leu Leu Ile Cys Ile
 130          135          140
Leu Asn Ser Tyr Phe Cys Tyr Tyr Ser Gly Pro Lys Asp Val Asn Asn
 145          150          155          160
Ser Val Cys Leu Val Ser Lys Phe Phe Ile Ser Thr Tyr Pro Met Phe
 165          170          175
Leu Phe Val Val Leu Cys Leu Ser Thr Leu Thr Leu Leu Ala Arg Leu
 180          185          190
Phe Cys Gly Ala Gly Lys Arg Lys Phe Thr Arg Leu Phe Val Thr Ile
 195          200          205
Ile Leu Thr Ile Leu Val Phe Leu Leu Cys Gly Leu Pro Leu Gly Phe
 210          215          220
Tyr Trp Phe Leu Leu His Cys Ile Lys Gly Ser Phe Ser Val Leu His
 225          230          235          240
Asn Arg Leu Phe Gln Ala Ser Leu Val Leu Thr Ser Val Asn Ser Cys
 245          250          255
Ala Asn Pro Ile Ile Tyr Phe Phe Val Gly Ser Phe Arg Asp Arg Val
 260          265          270
Lys His Gln Thr Leu Lys Met Val Leu Gln Asn Ala Leu Gln Asp Thr
 275          280          285
Pro Glu Thr Pro Glu Asn Lys Val Glu Met Ser Arg Ser Lys Ala Glu
 290          295          300
Pro
305
  
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<210> 60  
 <211> 740  
 <212> DNA  
 <213> Mus musculus

<400> 60

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cagggtttct ggccctaaac acctcagcct cggcaatgac acccagaca aacaattcaa 60
tgacgaaac catccctgga agtattggca ctgagaccct gattcaaaac ttgatgatca 120
tcattctcgg actggtcggg ctgacaggaa atgccattgt gttctggctc ctgggcttcc 180
  
```

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acttgcacag gaatgccttt ttagtctaca tcctaaactt ggccctggct gatttcctct 240
tccttctctg tcacatcata gattccacag tgtttcttct caaggttccc ccaccaacc 300
ggatcttggc ccatgtcttt aacatcatca gaattgtact ctacatcaca ggcttgagca 360
tgctcagtcg catcagcatg gagcgtgccc tgtctgtcct gtgccccatc tggatcgcct 420
gccgccgccc agaaaacaca tcaactgtca tttgtgtgtg gatctggatc ctgtccctgt 480
tgttctgcat tctgaatgga tatttctgtt atttctctgg tcccaactat gtaaagtact 540
atgtgtgttt tgcacgcggc atctttatca gaacataccc aatgtttttg tttgtagtcc 600
tctgtctgtc cactctggct ctgctggcca ggttgttctg tgggtgctggg aagacgaaat 660
ttaccagatt attcgtcacc atcatactga ccgttttggg ttttcttctc tgtgggttgc 720
ccctgggctt cttctggttc

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<210> 61  
 <211> 227  
 <212> PRT  
 <213> Mus musculus

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<400> 61
Met Asp Glu Thr Ile Pro Gly Ser Ile Gly Thr Glu Thr Leu Ile Gln
 1           5           10           15
Asn Leu Met Ile Ile Ile Phe Gly Leu Val Gly Leu Thr Gly Asn Ala
 20           25           30
Ile Val Phe Trp Leu Leu Gly Phe His Leu His Arg Asn Ala Phe Leu
 35           40           45
Val Tyr Ile Leu Asn Leu Ala Leu Ala Asp Phe Leu Phe Leu Leu Cys
 50           55           60
His Ile Ile Asp Ser Thr Val Phe Leu Leu Lys Val Pro Pro Pro Asn
 65           70           75           80
Arg Ile Leu Val His Cys Phe Asn Ile Ile Arg Ile Val Leu Tyr Ile
 85           90           95
Thr Gly Leu Ser Met Leu Ser Ala Ile Ser Met Glu Arg Cys Leu Ser
 100          105          110
Val Leu Cys Pro Ile Trp Tyr Arg Cys Arg Arg Pro Glu Asn Thr Ser
 115          120          125
Thr Val Ile Cys Ala Val Ile Trp Ile Leu Ser Leu Leu Phe Cys Ile
 130          135          140
Leu Asn Gly Tyr Phe Cys Tyr Phe Ser Gly Pro Asn Tyr Val Asn Asp
 145          150          155          160
Tyr Val Cys Phe Ala Ser Asp Ile Phe Ile Arg Thr Tyr Pro Met Phe
 165          170          175
Leu Phe Val Val Leu Cys Leu Ser Thr Leu Ala Leu Leu Ala Arg Leu
 180          185          190
Phe Cys Gly Ala Gly Lys Thr Lys Phe Thr Arg Leu Phe Val Thr Ile
 195          200          205
Ile Leu Thr Val Leu Val Phe Leu Leu Cys Gly Leu Pro Leu Gly Phe
 210          215          220
Phe Trp Phe
225

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<210> 62  
 <211> 1979  
 <212> DNA  
 <213> Mus musculus

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<400> 62
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acaaaaaaga aattaaagt tgtggtcata gtaaaggcct cacttcttct ttgtgttccc 120

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agcaacacca gtgcagggtt tctggcccca aacacctcag cctcgacaat gacacccaca 180
acaacaaatc caatgaacga aaccatccct ggaagtattg acatcgagac cctgatacca 240
aacttgatga tcatcatctt cggactgggc gggctgacag gaaatgccat tgtgttctgg 300
ctcctgggct tccgcatgca caggactgcc ttctcagtct acatcctaaa cttggccctg 360
gctgacttcc tcttccttct ctgtcacatc ataaattcca cagtgttctt tctccaggtt 420
tccccacca acagtacott ggtccattgc tttgacacca tcagaatggg tctctacatc 480
gcaggcctga gcatgctcag tgccattagc actgagcact gcctgtctgt cctgtgcccc 540
atctggatc gctgccgcgc cccagaacat acttcaactg tcatgtgtgc tgtgatctgg 600
gtcctgtccc tgttgatctg cattctaagt ggatatttct gtaatttttt tcttcacaaa 660
tatgtatatt actctgtgtg tcgggcattg gaattctgta tcggaacata ccccgatgtt 720
tttgttttgt agtctctgt ctgtccaccc tggctctgct gggtcagggtt ttctgtggta 780
ctgggaaggc aaaatttacc agattattcg tgaccatcat gctgactgtt ttgggttttc 840
ttctctgtgg gttgccctg tgtttcttct gggtcctggg agtctggatt aagcgtcctc 900
tcagtgtact aaatattaca ttttattttg catccattgt cctaactgtt gttaacagct 960
gtgccaaccc catcatttac ttcttcgtgg gtccttcag gcacgcgttg aagcaacaga 1020
acctcaaaat ggttctccag aatgcactgc aggacactgc tgagacacct gaaaacgtgg 1080
cagagatttc aagaagcaaa gcagagccct gatgaggagc ctctgcctgg acctcagagg 1140
tggttttggc actgagcact gccctgctgc acttgcccac tgtccactct cctctcagct 1200
tactgactgg caataactca gtggtacaac aacaccttca aaagctcacc actgacttag 1260
tatttctacc tatcccaagt aatagcatta atcagaaagt atcatgtctg catccttcta 1320
gacattattc aaattctcat ccaacttcat ctgaaacttt cttgtatatt ctttggaaca 1380
ttttttgcca tggtaatagc ccaggtccag catcatgcct ctcttacott tgattgttct 1440
gtacctgaat gtaaagaaaa aggagagaga agatgatcct ctgtcacagt gctcattacc 1500
caagcaccac taagagagct tgtctcccag gactgcagac aaacctgtga gcacaggtaa 1560
gactaccact tctgcttaaa ggggcatgcc tggaaacccac aggacacagg taaagaggag 1620
cagcctgaga aaggatactt tccagtttcc aactgcaccc tggagctgac cctgtgccac 1680
agctctcccc accttaattc ttcccagaaa gaactggtct mccagggaagt actgacacat 1740
agccttgtag gaggtacaag acactgtcac agatagcaag accagctaac accagagata 1800
accagatggc aagaggcaag ggcaaaaaca taagcaatgg gaaccaaggc tacttggcat 1860
catcagaacc tagttctctc aacaaagtga gccctggata ctccaacaca caagaaaagt 1920
atgactgtga ttaaaagtca ccgatgatga tgatgatgat gatgatgatg atgatgatg 1979

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<210> 63  
 <211> 305  
 <212> PRT  
 <213> Mus musculus

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<400> 63
Met Asn Glu Thr Ile Pro Gly Ser Ile Asp Ile Glu Thr Leu Ile Pro
1          5          10          15
Asn Leu Met Ile Ile Ile Phe Gly Leu Val Gly Leu Thr Gly Asn Ala
20          25          30
Ile Val Phe Trp Leu Leu Gly Phe Arg Met His Arg Thr Ala Phe Ser
35          40          45
Val Tyr Ile Leu Asn Leu Ala Leu Ala Asp Phe Leu Phe Leu Leu Cys
50          55          60
His Ile Ile Asn Ser Thr Val Leu Leu Leu Gln Val Ser Pro Pro Asn
65          70          75          80
Ser Thr Leu Val His Cys Phe Asp Thr Ile Arg Met Val Leu Tyr Ile
85          90          95
Ala Gly Leu Ser Met Leu Ser Ala Ile Ser Thr Glu His Cys Leu Ser
100         105         110
Val Leu Cys Pro Ile Trp Tyr Arg Cys Arg Arg Pro Glu His Thr Ser
115         120         125
Thr Val Met Cys Ala Val Ile Trp Val Leu Ser Leu Leu Ile Cys Ile
130         135         140
Leu Ser Gly Tyr Phe Cys Asn Phe Phe Leu His Lys Tyr Val Tyr Tyr

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145		150		155		160									
Ser	Val	Cys	Arg	Ala	Leu	Glu	Phe	Cys	Ile	Gly	Thr	Tyr	Pro	Met	Phe
				165					170					175	
Leu	Phe	Val	Val	Leu	Cys	Leu	Ser	Thr	Leu	Ala	Leu	Leu	Val	Arg	Leu
			180					185					190		
Phe	Cys	Gly	Thr	Gly	Lys	Ala	Lys	Phe	Thr	Arg	Leu	Phe	Val	Thr	Ile
		195					200					205			
Met	Leu	Thr	Val	Leu	Val	Phe	Leu	Leu	Cys	Gly	Leu	Pro	Leu	Cys	Phe
	210					215				220					
Phe	Trp	Phe	Leu	Val	Val	Trp	Ile	Lys	Arg	Pro	Leu	Ser	Val	Leu	Asn
225					230					235					240
Ile	Thr	Phe	Tyr	Phe	Ala	Ser	Ile	Val	Leu	Thr	Val	Val	Asn	Ser	Cys
				245					250					255	
Ala	Asn	Pro	Ile	Ile	Tyr	Phe	Phe	Val	Gly	Ser	Phe	Arg	His	Arg	Leu
			260					265					270		
Lys	Gln	Gln	Asn	Leu	Lys	Met	Val	Leu	Gln	Asn	Ala	Leu	Gln	Asp	Thr
	275					280					285				
Ala	Glu	Thr	Pro	Glu	Asn	Val	Ala	Glu	Ile	Ser	Arg	Ser	Lys	Ala	Glu
	290					295					300				
Pro															
305															

<210> 64  
 <211> 1485  
 <212> DNA  
 <213> Mus musculus

<400> 64  
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 cctcggcaat ggcacccacg acaacaaatc caaaggaag caaacaatcc ctgggaagta 180  
 ttgacatcga gaccotgate tcaaacttga tgatcatcat tttcgggctg gtagggtgc 240  
 caggaaatgc cattgtgttc tggctcctgg gcttctgctt gcacaggaat gccttcttag 300  
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 ccacagtgtc tcttctcaag gttccccac ccaacggtaa tattggtcca ttgcttcaac 420  
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 cgctgcctgt ctatcctgtg ccccatctgg tatcgctgcc accgccaga acacacatca 540  
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 gctggccaag ttgttctgtg gttctgggaa gacgaaattt accagattat ttgtgacct 780  
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 ctgttactct ggattaaggg tgcttacagt gtactagggt atagatttta ttttgcata 900  
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 tatcatgtct gcaccttct tgacattaat ccaattctca tactaacttc atctgaaact 1320  
 ttcttctgtt ttctttggaa cttttgttgc catagtaata gccagatcc agcaccatga 1380  
 ctacttgtc tgtgattatt ctgtacctga atgtaaagaa aaaggcagga gatgatcctg 1440  
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<210> 65  
 <211> 300

<212> PRT  
<213> Mus musculus

<400> 65

Gly Ser Ile Asp Ile Glu Thr Leu Ile Ser Asn Leu Met Ile Ile Ile  
1 5 10 15  
Phe Gly Leu Val Gly Leu Pro Gly Asn Ala Ile Val Phe Trp Leu Leu  
20 25 30  
Gly Phe Cys Leu His Arg Asn Ala Phe Leu Val Tyr Ile Leu Asn Leu  
35 40 45  
Ala Leu Ala Asp Val Leu Phe Leu Leu Cys His Ile Ile Asn Ser Thr  
50 55 60  
Val Leu Leu Leu Lys Val Pro His Pro Thr Val Ile Leu Val His Cys  
65 70 75 80  
Phe Asn Ile Ile Arg Ile Val Leu Tyr Ile Thr Gly Leu Ser Met Leu  
85 90 95  
Ser Ala Ile Ile Thr Glu Arg Cys Leu Ser Ile Leu Cys Pro Ile Trp  
100 105 110  
Tyr Arg Cys His Arg Pro Glu His Thr Ser Thr Ala Met Cys Ala Val  
115 120 125  
Ile Trp Val Leu Ser Leu Leu Ile Cys Ile Leu Gly Lys Tyr Phe Cys  
130 135 140  
Asn Phe Phe Leu His Lys Tyr Val Asn Tyr Ser Val Cys Leu Ala Leu  
145 150 155 160  
Asp Ser Phe Ile Gly Thr Tyr Pro Met Phe Leu Leu Val Val Leu Cys  
165 170 175  
Leu Ser Thr Met Ala Leu Leu Ala Arg Leu Phe Cys Gly Ser Gly Lys  
180 185 190  
Thr Lys Phe Thr Arg Leu Phe Val Thr Ile Met Leu Thr Val Leu Val  
195 200 205  
Phe Leu Leu Cys Leu Gly Leu Pro Leu Gly Phe Phe Trp Phe Leu Leu  
210 215 220  
Leu Trp Ile Lys Gly Ala Tyr Ser Val Leu Gly Tyr Arg Phe Tyr Phe  
225 230 235 240  
Ala Ser Ile Val Leu Thr Ala Val Asn Ser Cys Ala Asn Pro Ile Ile  
245 250 255  
Tyr Phe Phe Met Gly Ser Phe Arg Gln Arg Leu Gln His Lys Thr Leu  
260 265 270  
Lys Ile Val Leu Gln Ser Ala Leu His Asp Thr Pro Glu Thr Pro Glu  
275 280 285  
Asn Met Val Glu Met Ser Arg Ser Lys Ala Glu Pro  
290 295 300

<210> 66  
<211> 1518  
<212> DNA  
<213> Mus musculus

<400> 66

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tcggcaatag caccacaac aaccaaacca atggacgaaa ccattccctgg aagtattgac 180  
actgagaccc tgtatccaac acttgatgat catcatcttc ggactggctg ggctgacagg 240  
aaatggcatt gtgttgtggc tcctgggctt ccacttgcaa aggaatgcct ttttagtcta 300  
catcctaaac ttggccctag ctgacttcct ctaccttctc tgtcacatca tagattccac 360  
aatgcttctt ctcaaggttc cccacccaa ctggatcttg gtccattgct ttaggaccat 420

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ccaaatTTTT ctctacatca caggcctgag catgctcagt gccatcagca cagagcgctg 480
cctgtctgtc ctgtgcccc tctgggtatcg ctgccgccgc ccagaaaaca catcaactgt 540
gatgtgtgct gtgatctggg tctgtctcctt gttgatctgc attctgcatg gatatttttc 600
tgttatttct ctggtctcag ttatgaaaat tactctgtgt gttttgcatc agcgatcatt 660
atcagttcat acccaacgtt tttgcttgta gtctctgtc tgtccaccct ggctctgctg 720
gccaggttgt tctgtggtgc tgggaagagg aaatTTTcca gattattcgt gaccatcata 780
cttaccgttt tggTTTTct tctctgtggg ttgccctggg gagccctctg gttcccatta 840
ctctggattc aggggtggtt ctggaaaaga ctttttcagg catcaattgt cctatcttct 900
gttaacagct gtgccaaccc catcatttat ttcttcgtgg gctcattcag gcacgcattg 960
aagcaccaga ccttaaaat gggtctccag aatgcactgc aggacactcc tgagacaact 1020
gaaaacatgg tggagatgtc aagaagtaaa gcagagccat gatgaagagc ctctgccttg 1080
acctcagagg tggatttga gtgagcactg cctgctgca cttgaccact gtccactctc 1140
ctctcagctt actgacttgg aatgcctcag tggTccaaaa acaccttcaa aagctctcca 1200
ctgactaagt atttctacct atoccaaagta atagcattaa tcagaaagta ccatgtctgc 1260
atccttcttg acattaatca aattctctta ctatcttcat ctgaaacttt cttgttggtt 1320
ctttggaact tttgttgcca tggtaatagc ccaagtccag caccatgact ttcttatctg 1380
tgattgttct atacctgaat gtaaaggcaa aggagccagg agatgatcct gtgttacagt 1440
gctcattacc caaacaccac caagagagct tgtctcccag gagtgcagac acgcctgtga 1500
acacaggtaa gaccacca                                     1518

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<210> 67
<211> 303
<212> PRT
<213> Mus musculus

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<400> 67
Met Asp Glu Thr Ile Pro Gly Ser Ile Asp Thr Glu Thr Leu Tyr Pro
 1             5             10             15
Asn Leu Met Ile Ile Ile Phe Gly Leu Val Gly Leu Thr Gly Asn Gly
 20             25             30
Ile Val Leu Trp Leu Leu Gly Phe His Leu Gln Arg Asn Ala Phe Leu
 35             40             45
Val Tyr Ile Leu Asn Leu Ala Leu Ala Asp Phe Leu Tyr Leu Leu Cys
 50             55             60
His Ile Ile Asp Ser Thr Met Leu Leu Leu Lys Val Pro Pro Pro Asn
 65             70             75             80
Trp Ile Leu Val His Cys Phe Arg Thr Ile Gln Ile Phe Leu Tyr Ile
 85             90             95
Thr Gly Leu Ser Met Leu Ser Ala Ile Ser Thr Glu Arg Cys Leu Ser
100            105            110
Val Leu Cys Pro Ile Trp Tyr Arg Cys Arg Arg Pro Glu Asn Thr Ser
115            120            125
Thr Val Met Cys Ala Val Ile Trp Val Leu Ser Leu Leu Ile Cys Ile
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Leu His Gly Tyr Phe Cys Cys Tyr Phe Ser Gly Leu Ser Tyr Glu Asn
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Tyr Ser Val Cys Phe Ala Ser Ala Ile Ile Ile Ser Ser Tyr Pro Thr
165            170            175
Phe Leu Leu Val Val Leu Cys Leu Ser Thr Leu Ala Leu Leu Ala Arg
180            185            190
Leu Phe Cys Gly Ala Gly Lys Arg Lys Phe Ser Arg Leu Phe Val Thr
195            200            205
Ile Ile Leu Thr Val Leu Val Phe Leu Leu Cys Gly Leu Pro Trp Gly
210            215            220
Ala Leu Trp Phe Pro Leu Leu Trp Ile Gln Gly Gly Phe Trp Lys Arg
225            230            235            240
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 <212> PRT  
 <213> Mus musculus

<400> 69

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Thr	Val	Leu	Leu	Leu	Lys	Val	Pro	Leu	Pro	Asn	Trp	Ile	Leu	Phe	His
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Cys	Phe	Asn	Thr	Ile	Arg	Ile	Val	Leu	Tyr	Ile	Thr	Gly	Leu	Asn	Met

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Trp	Tyr	His	Cys	Cys	Arg	Pro	Glu	His	Thr	Ser	Thr	Val	Met	Cys	Ala
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Val	Ile	Trp	Val	Leu	Ser	Leu	Leu	Ile	Cys	Ile	Leu	Asn	Glu	Tyr	Phe
		115					120					125			
Cys	Asp	Phe	Phe	Gly	Thr	Lys	Leu	Val	Asn	Tyr	Tyr	Val	Cys	Leu	Ala
	130					135					140				
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Cys	Leu	Ser	Thr	Leu	Ala	Leu	Leu	Ala	Arg	Leu	Phe	Cys	Gly	Ala	Gly
			165					170						175	
Asn	Thr	Lys	Phe	Thr	Arg	Phe	His	Met	Thr	Ile	Leu	Leu	Thr	Pro	Leu
		180					185						190		
Phe	Phe	Leu	Leu	Cys	Gly	Leu	Pro	Phe	Ala	Ile	Cys	Phe	Leu	Leu	Phe
	195					200					205				
Lys	Ile	Lys	Asp	Asp	Phe	His	Val	Phe	Tyr	Ile	Asn	Leu	Phe	Leu	Ala
210					215						220				
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225				230						235					240
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			245					250						255	
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 <212> DNA  
 <213> Mus musculus

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 <212> PRT  
 <213> Mus musculus

<400> 71

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Ile	Val	Phe	Trp	Ile	Leu	His	Phe	Pro	Leu	Arg	Arg	Asn	Ala	Phe	Lys
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Val	Tyr	Ile	Leu	Asn	Leu	Asp	Leu	Ala	Asp	Phe	Phe	Phe	Leu	Leu	Gly
	50				55					60					
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65				70						75				80	
Ile	Phe	Ile	Leu	Cys	Phe	Tyr	Ile	Ile	Met	Met	Val	Leu	Tyr	Ile	Ala
			85					90					95		
Gly	Leu	Ser	Met	Leu	Thr	Ala	Ile	Ser	Thr	Glu	His	Gly	Leu	Ser	Val
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Ala	Met	Cys	Ala	Val	Ile	Trp	Val	Leu	Ser	Leu	Leu	Ile	Cys	Ile	Leu
	130					135					140				
Asn	Ser	Tyr	Phe	Gly	Phe	Leu	His	Ser	Lys	Tyr	Glu	Asn	Asp	Asn	Gly
145				150						155				160	
Cys	Leu	Ala	Leu	Asn	Phe	Phe	Thr	Ser	Ala	Tyr	Leu	Met	Phe	Leu	Phe
			165						170					175	
Val	Asp	Leu	Cys	Leu	Ser	Ser	Leu	Ala	Leu	Leu	Ala	Arg	Leu	Phe	Cys
			180					185					190		
Asp	Val	Gly	Gln	Met	Lys	Leu	Thr	Arg	Tyr	Val	Thr	Ile	Leu	Leu	Thr
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	210					215					220				
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225					230					235					240

Tyr	Leu	Glu	Ser	Leu	Val	Met	Thr	Ala	Ile	Asn	Ser	Cys	Ala	Asn	Ser
				245					250					255	
Ile	Ile	Tyr	Phe	Phe	Thr	Gly	Ser	Phe	Arg	Leu	Arg	Leu	Gln	His	Gln
			260					265					270		
Thr	Leu	Lys	Met	Val	Leu	Gln	Arg	Thr	Met	Asp	Thr	Pro	Glu	Thr	Pro
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<210> 72

<211> 2758

<212> DNA

<213> Mus musculus

<400> 72

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<210> 73
<211> 304
<212> PRT
<213> Mus musculus

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Ile Val Phe Trp Ile Leu Gly Phe Arg Phe His Arg Asn Ala Ile Leu
 35           40           45
Val Tyr Ile Leu Asn Leu Ala Leu Ala Asp Phe Phe Phe Leu Leu Cys
 50           55           60
His Ile Ile Asn Ser Thr Met His Leu Phe Lys Val Arg Pro His Asn
 65           70           75           80
Ser Ile Phe Ile His Cys Phe Asp Thr Ile Arg Thr Val Leu Tyr Ile
 85           90           95
Thr Gly Leu Ser Met Leu Ser Ala Ile Ser Thr Asp Arg Cys Leu Ser
100           105           110
Val Leu Cys Pro Ile Trp Tyr Arg Cys His Arg Pro His Thr Ser Thr
115           120           125
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130           135           140
Asn Arg Tyr Phe Cys Asp Leu Phe Gly Pro Lys Tyr Glu Ile Asn Ser
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Val Cys Gln Ala Ser Glu Phe Phe Ile Arg Ile Tyr Pro Ile Phe Leu
165           170           175
Phe Val Val Leu Cys Phe Ser Thr Leu Thr Leu Leu Ala Arg Leu Phe
180           185           190
Cys Gly Ala Gly Lys Lys Lys Phe Thr Arg Leu Phe Met Thr Ile Met
195           200           205
Val Thr Ile Leu Val Phe Leu Leu Cys Gly Leu Pro Leu Gly Phe Leu
210           215           220
Trp Phe Leu Leu Pro Trp Ile Glu Gly Gly Phe Ser Ile Leu Asp Tyr
225           230           235           240
Arg Phe Phe Leu Ala Ser Leu Val Leu Thr Ala Val Asn Ser Cys Ala
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Asn Pro Ile Ile Tyr Phe Phe Val Gly Ser Tyr Arg His Pro Leu Lys
260           265           270
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<210> 74
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<212> DNA
<213> Mus musculus

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<400> 74

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<210> 75

<211> 303

<212> PRT

<213> Mus musculus

<400> 75

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      20             25             30
Phe Val Phe Leu Leu Gly Phe His Leu His Arg Asn Ala Phe Leu Val
      35             40             45
Tyr Ile Leu Asn Leu Ala Leu Thr Asp Phe Leu Phe Leu Leu Cys His
      50             55             60
Ile Ile Asn Ser Thr Val Ile Leu Leu Asn Val Pro Leu Pro Asn Met
      65             70             75             80
Ile Leu Val His Cys Phe Ser Thr Ile Arg Ile Phe Leu Asn Ile Thr
      85             90             95
Gly Leu Ser Ile Leu Ser Ala Ile Ser Thr Glu Arg Cys Leu Ser Val
      100            105            110
Leu Cys Pro Ile Trp Tyr Arg Cys His His Pro Glu His Thr Ser Thr
      115            120            125
Val Met Cys Ala Val Ile Val Leu Ser Leu Leu Ile Cys Thr Leu Tyr
      130            135            140
Arg Tyr Phe Cys Phe Phe Phe Gly Pro Lys Tyr Val Phe Asp Ser Val
      145            150            155            160
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Cys	Leu	Ala	Thr	Thr	Tyr	Phe	Ile	Arg	Thr	Tyr	Pro	Met	Phe	Leu	Phe
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Met	Val	Leu	Cys	Leu	Ser	Thr	Leu	Ala	Leu	Leu	Ala	Arg	Leu	Phe	Cys
			180					185					190		
Gly	Ala	Gly	Lys	Lys	Lys	Phe	Thr	Arg	Leu	Phe	Val	Thr	Ile	Met	Leu
		195					200					205			
Thr	Val	Leu	Val	Phe	Leu	Leu	Cys	Gly	Met	Pro	Leu	Gly	Phe	Phe	Trp
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Phe	Val	Phe	Pro	Trp	Ile	Asn	Cys	Asp	Phe	Ser	Val	Leu	Asp	Tyr	Arg
225					230					235					240
Leu	Phe	Leu	Ala	Ser	Ile	Val	Leu	Thr	Ala	Val	Asn	Ser	Tyr	Gly	Asn
			245						250					255	
Pro	Ile	Ile	Tyr	Phe	Phe	Val	Gly	Ser	Phe	Arg	Asn	Arg	Leu	Lys	His
			260					265					270		
Gln	Thr	Leu	Gln	Lys	Val	Leu	Gln	Ser	Ala	Leu	His	Asp	Thr	Pro	Glu
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 <211> 1011  
 <212> DNA  
 <213> Mus musculus

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 gtcgtatgag aggagaaatc acaacagcag aaatgacaac tgaggaattg tctagattat 360  
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<210> 77  
 <211> 274  
 <212> PRT  
 <213> Mus musculus

<400> 77  
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 Tyr Ile Leu Asn Ala Gly Ala Asn Phe Leu Phe Leu Cys Pro Tyr Ile  
 35 40 45  
 Val Phe Ser Leu Val Thr Ile Thr Val Asn Phe His Ser Ile Asn Ser

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His Ile Ile Leu Phe Leu Asn Thr Val Phe Thr Leu Ala Tyr Leu Ala					
65		70		75	80
Gly Val Ser Met Ile Thr Ala Ile Ser Val Glu Tyr Trp Leu Ser Val					
	85		90		95
Ile Trp Ser Asn Trp Tyr His Gly Arg His Pro Lys His Thr Ser Ala					
	100		105		110
Phe Ile Cys Thr Leu Leu Trp Ala Val Ser Leu Leu Leu Ser Leu Pro					
	115		120		125
His Glu Ile Ile Cys Gly Leu Leu Asp His Ile Tyr Asn Trp Asp Met					
	130		135		140
Cys Trp Lys Cys Lys Leu Ile Ile Val Val Trp Leu Leu Ile Glu Phe					
145		150		155	160
Val Val Leu Ser Gln Ser Asn Gln Ala Met Met Phe Arg Ile Phe Cys					
	165		170		175
Gly Ser Gln Gln Thr Pro Met Thr Arg Leu Phe Val Thr Ile Val Leu					
	180		185		190
Thr Ala Leu Val Val Leu Ile Cys Gly Phe Pro Leu Gly Ile Tyr Ile					
	195		200		205
Tyr Phe Leu Tyr Trp Thr Thr Asp Val Tyr Phe Ile Met Pro Cys Asn					
	210		215		220
Ser Phe His Glu Thr Ile Leu Leu Leu Ser Ala Val Asn Ser Cys Ala					
225		230		235	240
Asn Pro Ile Ile Cys Leu Leu Val Gly Ser Ile Lys His Cys Gln Phe					
	245		250		255
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Pro Glu					

<210> 78  
 <211> 1358  
 <212> DNA  
 <213> Mus musculus

<400> 78  
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<210> 79  
 <211> 268  
 <212> PRT  
 <213> Mus musculus

<400> 79  
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 50 55 60  
 Tyr Ile Leu Leu Ile Leu Ser Met Phe Ala Tyr Leu Ala Gly Leu Ser  
 65 70 75 80  
 Met Ile Ala Thr Ile Ser Thr Glu Arg Cys Leu Ser Val Met Trp Pro  
 85 90 95  
 Ile Trp Tyr His Cys Gln Arg Pro Arg His Thr Ser Ala Ile Met Ser  
 100 105 110  
 Val Leu Leu Trp Val Phe Ser Ile Leu Leu Ser Leu Leu Val Gly Leu  
 115 120 125  
 Gly Cys Gly Phe Leu Phe Arg Tyr Ser Glu Tyr Tyr Phe Cys Ile Thr  
 130 135 140  
 Leu Asn Phe Ile Thr Ala Ala Phe Ile Ile Gly Leu Ser Val Val Leu  
 145 150 155 160  
 Ser Val Ser Ser Leu Thr Leu Leu Val Lys Ile Ile Cys Gly Ser His  
 165 170 175  
 Arg Ile Pro Val Thr Arg Leu Phe Val Thr Ile Cys Phe Thr Val Val  
 180 185 190  
 Val Phe Ile Ile Phe Gly Met Pro Leu Gly Ile Cys Trp Phe Leu Phe  
 195 200 205  
 Pro Ser Ile Ile Glu Phe His Lys Ile Phe Ser Asn Asn Phe Tyr Glu  
 210 215 220  
 Met Ile Ala Phe Leu Ser Cys Ile Asn Ser Cys Ala Asn Pro Ile Ile  
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<210> 80  
 <211> 2387  
 <212> DNA  
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Phe Val Ile Ile Tyr Thr Ile Lys Ser Ile Ser Asn Asp Ile Leu Ser  
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65 70 75 80  
Leu Ile Thr Ile Ser Ile Glu Arg Cys Leu Tyr Val Met Trp Pro Ile  
85 90 95  
Trp Tyr His Cys Gln Cys Pro Arg His Thr Ser Ala Val Ile Cys Val  
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Leu Leu Trp Ala Leu Ser Leu Val Phe Met Phe Leu Asp Gly Lys Ala  
115 120 125  
Tyr Phe Leu Leu Phe Ser Asp Pro Asn Ser Phe Trp Tyr Gln Thr Phe  
130 135 140  
Asp Ile Ile Ile Thr Val Thr Ile Val Leu Phe Val Val Leu Cys Gly  
145 150 155 160  
Ser Ser Leu Ile Leu Leu Phe Arg Ile Phe Cys Gly Ser Gln Gln Ile  
165 170 175  
Pro Val Thr Arg Leu Asp Val Ile Ile Ala Leu Arg Val Leu Phe Phe  
180 185 190  
Leu Ile Phe Ser Phe Pro Phe Trp Ile Tyr Trp Leu Leu Asp Gln Arg  
195 200 205  
Ile Gly Arg Arg Cys Asn Phe Leu Asn Glu Met Ile Phe Leu Ser Cys  
210 215 220  
Ile Lys Ser Cys Val Asn Ser Ile Ile Tyr Phe Leu Val Ala Ser Ile  
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<210> 84

<211> 2349

<212> DNA

<213> Mus musculus

<400> 84

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<210> 85

<211> 273

<212> PRT

<213> Mus musculus

<400> 85

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 20             25             30
Tyr Ile Leu Asn Leu Ala Gly Ala Asp Phe Leu Phe Ile Cys Phe Gln
 35             40             45
Ile Gly Tyr Cys Phe His Met Ile Leu Asp Ile Asp Ser Ile Pro Ile
 50             55             60
Glu Ile Asp Leu Phe Tyr Leu Val Val Leu Asn Phe Pro Tyr Phe Cys
 65             70             75             80
Gly Leu Ser Ile Leu Ser Ala Ile Ser Ile Glu Arg Cys Leu Ser Val
 85             90             95
Met Trp Pro Ile Trp Tyr His Cys Gln Arg Pro Arg His Thr Ser Ala
 100            105            110
Val Ile Cys Thr Leu Leu Trp Val Leu Ser Leu Val Cys Ser Leu Leu
 115            120            125
Glu Gly Lys Glu Cys Gly Phe Leu Tyr Tyr Thr Ser Asp Pro Gly Trp
 130            135            140
Cys Lys Thr Phe Asp Leu Ile Thr Ala Thr Trp Leu Ile Val Leu Phe
 145            150            155            160
Val Ala Leu Leu Gly Ser Ser Leu Ala Leu Val Ile Thr Ile Phe Trp
 165            170            175
Gly Leu His Lys Ile Pro Val Thr Arg Leu Tyr Val Ala Ile Val Phe
 180            185            190

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Thr Val Leu Val Phe Leu Leu Phe Gly Leu Pro Tyr Gly Ile Tyr Trp  
 195 200 205  
 Phe Leu Leu Val Trp Ile Glu Lys Phe Tyr Tyr Val Leu Pro Cys Ser  
 210 215 220  
 Ile Tyr Pro Val Thr Val Phe Leu Ser Cys Val Asn Ser Ser Ala Lys  
 225 230 235 240  
 Pro Ile Ile Tyr Cys Leu Val Gly Ser Ile Arg His His Arg Phe Gln  
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<210> 86  
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 <212> DNA  
 <213> Mus musculus

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 <211> 270  
 <212> PRT  
 <213> Mus musculus

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 Tyr Ile Leu Asn Leu Ala Gly Ala Asp Phe Leu Phe Leu His Ser Gln  
 35 40 45  
 Phe Leu Phe Tyr Leu Leu Ala Ile Phe Pro Ser Ile Pro Ile Gln Ile  
 50 55 60

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Ser	Ile	Leu	Ser	Thr	Ile	Ser	Ile	Glu	Arg	Cys	Leu	Cys	Val	Met	Trp
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Pro	Ile	Trp	Tyr	Arg	Cys	Gln	Arg	Pro	Arg	His	Thr	Ser	Ser	Val	Thr
			100					105					110		
Cys	Ser	Leu	Leu	Trp	Ala	Leu	Ser	Leu	Leu	Phe	Ala	Leu	Leu	Asp	Gly
		115					120					125			
Met	Gly	Cys	Gly	Leu	Leu	Phe	Asn	Ser	Phe	Asp	Gln	Ser	Trp	Cys	Leu
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Gln	Gln	Ile	Pro	Val	Thr	Arg	Leu	Tyr	Val	Thr	Ile	Ala	Leu	Thr	Val
			180					185					190		
Leu	Phe	Phe	Leu	Ile	Cys	Cys	Leu	Pro	Phe	Gly	Ile	Ser	Trp	Ile	Ile
		195					200					205			
Gln	Trp	Ser	Glu	Thr	Leu	Ile	Tyr	Val	Gly	Phe	Cys	Asp	Tyr	Phe	His
	210					215					220				
Glu	Glu	Leu	Phe	Leu	Ser	Cys	Ile	Asn	Ser	Cys	Ala	Asn	Pro	Ile	Ile
225					230					235					240
Tyr	Phe	Leu	Val	Gly	Phe	Ile	Arg	Gln	Arg	Lys	Phe	Gln	Gln	Lys	Ser
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<210> 88

<211> 1883

<212> DNA

<213> Mus musculus

<400> 88

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<210> 89

<211> 263

<212> PRT

<213> Mus musculus

<400> 89

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 20           25           30
Tyr Val Leu Asn Leu Ser Cys Ala Asp Phe Leu Gln Ile Cys Thr Gln
 35           40           45
Phe Val His Ser Pro Ala Val Phe Leu Lys Ile Leu Met Ile Tyr Tyr
 50           55           60
His Phe Ile Leu Thr Gly Phe Met Ile Ala Leu Ala Gly Leu Cys Met
 65           70           75           80
Ile Ser Thr Ile Ser Ala Glu His Cys Leu Ser Val Met Trp Pro Ile
 85           90           95
Trp Tyr His Cys Arg Pro Arg His Thr Ser Ala Val Met Cys Ala Leu
100           105           110
Leu Trp Val Phe Ser Ile Leu Leu Ile Leu Leu Phe Val Gln Gly Cys
115           120           125
Gly Phe Leu Leu Ser Tyr Tyr Glu His Asn Phe Cys Ile Ile Cys His
130           135           140
Tyr Ile Ala Thr Ala Leu Ile Ile Val Leu Ser Val Val Ser Phe Val
145           150           155           160
Ser Ser Leu Ala Leu Phe Val Thr Met Phe Cys Val Ser Leu Arg Ile
165           170           175
Pro Val Thr Met Phe Tyr Val Ser Ile Ala Leu Thr Leu Met Val Phe
180           185           190
Ile Phe Phe Gly Met Pro Ile Gly Ile Cys Thr Phe Leu Leu Thr Met
195           200           205
Phe Met Asp Leu His Ser Ser His Thr Met Phe Leu Lys His Ser
210           215           220
Cys Val Asn Ser Cys Ala Asn Pro Ile Ile Tyr Ser Leu Leu Gly Ser
225           230           235           240
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Arg Thr Met Asp Ser Ser Glu
260

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<210> 90

<211> 1219

<212> DNA

<213> Mus musculus

<400> 90

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gaaactgggtc attccaaatg cagtccaatc ctgactctgt cctttctggt cctcatcact 240
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<210> 91

<211> 270

<212> PRT

<213> Mus musculus

<400> 91

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Tyr Val Leu Asn Leu Ala Leu Ala Asp Ser Phe Phe Leu Gly Cys Asp
35 40 45
Phe Ile Glu Phe Leu Leu Arg Ile Ile Asp Phe Ile Tyr Ala His Lys
50 55 60
Leu Ser Lys Asp Ile Leu Gly Asn Thr Ala Ile Ile Pro Tyr Ile Ala
65 70 75 80
Gly Gln Asn Val Leu Ser Ala Ile Ser Met Glu His Cys Leu Ser Val
85 90 95
Leu Trp Pro Ile Trp Tyr His Tyr His His Pro Arg Asn Met Ser Ala
100 105 110
Ile Ile Cys Ala Leu Ile Trp Val Leu Tyr Phe Leu Met Gly Ile Leu
115 120 125
His Trp Phe Phe Ser Val Phe Leu Gly Glu Ala His His His Leu Arg
130 135 140
Lys Lys Val Asp Phe Thr Ile Thr Ala Phe Leu Ile Phe Leu Phe Met
145 150 155 160
Leu His Ser Val Ser Ser Leu Ala Leu Leu Leu Arg Ile Leu Cys Gly
165 170 175
Ser Arg Arg Lys Pro Leu Ser Arg Leu Tyr Val Thr Ile Ala Leu Thr
180 185 190
Val Met Val Tyr Leu Ile Ser Gly Leu Pro Leu Gly Leu Tyr Leu Phe
195 200 205
Leu Leu Tyr Trp Phe Gly Val His Leu His His Pro Ser Cys His Asn
210 215 220
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Tyr Gln Val Thr Ser Val Leu Pro Cys Val Asn Ser Tyr Asn Asn Pro  
 225 230 235 240  
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 <213> Mus musculus

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 <211> 243  
 <212> PRT  
 <213> Mus musculus

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 20 25 30  
 Tyr Val Leu Asn Leu Ala Leu Ala Asp Ser Val Phe Leu Cys Cys His  
 35 40 45  
 Phe Ile Asp Ser Leu Leu Cys Ile Ile Asp Phe Tyr Leu Cys Pro Asp  
 50 55 60  
 Ala Asp Thr Leu Gly Asn Ala Glu Ile Ile Pro Tyr Ile Thr Gly Leu  
 65 70 75 80  
 Ser Ile Leu Ser Ala Ile Ser Met Glu Asp Tyr Leu Ser Val Leu Trp  
 85 90 95  
 Pro Ile Trp Tyr His Cys His His Pro Arg Asn Met Ser Thr Ile Leu  
 100 105 110  
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 115 120 125

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<210> 95

<211> 269

<212> PRT

<213> Mus musculus

<400> 95

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 20          25          30
Val Leu Asn Leu Ala Leu Gly Asp Ser Phe Phe Leu Cys Cys His Phe
 35          40          45
Ile Asp Ser Leu Leu Trp Ile Ile Asp Phe Ile Tyr Ala His Lys Leu
 50          55          60
Asn Lys Asp Ile Leu Gly Asn Ala Ala Ile Ile Pro Tyr Met Ala Gly
 65          70          75          80
His Ser Leu Leu Ser Ala Ile Ser Met Glu His Cys Leu Ser Val Leu
 85          90          95
Trp Pro Ile Trp Tyr Asp Phe His His Gln Ser Asn Met Ser Ala Ile
100          105          110
Leu Tyr Ala Leu Ile Trp Val Leu Ser Ile Leu Ile Gly Ile Leu Asp
115          120          125
Trp Phe Phe Leu Gly Phe Leu Gly Glu Thr Asn His His Leu Cys Glu
130          135          140
Asn Val Ala Phe Ile Ile Thr Ala Phe Leu Ile Phe Leu Phe Met Leu
145          150          155          160
Leu Ser Val Ser Ser Leu Ala Leu Leu Leu Arg Ile Leu Cys Gly Pro
165          170          175
Arg Lys Lys Pro Leu Ser Arg Leu Val Thr Ile Ser Leu Thr Val Met
180          185          190
Val Tyr Leu Ile Cys Gly Leu Pro Leu Gly Leu Tyr Phe Phe Leu Leu
195          200          205
His Trp Phe Gly Val His Leu His Tyr Pro Ser Cys His Ile Tyr Gln
210          215          220
Val Thr Ala Val Leu Ser Cys Val Asn Ser Ser Ala Asn Pro Ile Ile
225          230          235          240
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<211> 1954

<212> DNA

<213> Mus musculus

<400> 96





<210> 99  
 <211> 262  
 <212> PRT  
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Tyr	Val	Leu	Asn	Leu	Ala	Leu	Gly	Asp	Ser	Phe	Phe	Cys	Cys	His	Phe
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Ser	Lys	Asp	Ile	Leu	Gly	Asn	Val	Ala	Ile	Val	Pro	Tyr	Ile	Ala	Gly
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			85					90						95	
Pro	Ile	Trp	Tyr	His	Cys	His	His	Pro	Arg	Asn	Met	Ser	Ala	Ile	Leu
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Cys	Ala	Leu	Ile	Trp	Val	Leu	Phe	Phe	Leu	Met	Gly	Ile	Leu	Gly	Gly
	115					120					125				
Ser	Ser	Asp	Phe	Trp	Val	Lys	Leu	Ile	Ile	Asp	Phe	Ile	Ile	Pro	Ala
	130				135						140				
Phe	Leu	Ile	Phe	Phe	Leu	Phe	Met	Leu	Leu	Ser	Gly	Ser	Ile	Leu	Ala
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		180						185					190		
Leu	Pro	Leu	Gly	Leu	Tyr	Leu	Val	Leu	Leu	Tyr	Cys	Phe	Gly	Val	His
	195					200						205			
Leu	His	His	Pro	Ser	Pro	His	Ile	Tyr	Gln	Val	Thr	Val	Val	Leu	Ser
	210					215					220				
Tyr	Val	Asp	Ser	Ser	Ala	Asn	His	Ile	Phe	Tyr	Phe	Leu	Ala	Gly	Ser
225					230					235					240
Phe	Arg	Tyr	Cys	Arg	Lys	His	Trp	Ser	Leu	Gln	Thr	Leu	Leu	Lys	Arg
			245					250						255	
Thr	Leu	Glu	Asp	Thr	Pro										
			260												

<210> 100  
 <211> 1290  
 <212> DNA  
 <213> Mus musculus

<400> 100

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gaatcacact gctgaatgaa actgggtcaac ccaacttcag tccaatcctg actctgtctc 660  
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ggctgagtat cctcagtgtc attagcatgg agcactgcct gtctgtatag tggcaaagtc 960  
ggtaccactg ccactacca agaaacatgt cagctatcct atgtgcccta atctgggttc 1020  
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atcatttatg gaaaaatatt gacttcatta taactgcatt tctgattttt ttatttatgc 1140  
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ccctgtccag gctatatatt atcatctctc tcacagtgat ggtctacctc atctgggcct 1260  
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<210> 101

<211> 207

<212> PRT

<213> Mus musculus

<400> 101

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		20						25					30		
Val	Leu	Asn	Leu	Ala	Leu	Ala	Asp	Ser	Phe	Phe	Leu	Ser	Cys	Gln	Phe
		35					40					45			
Ile	Asp	Ser	Leu	Leu	Ser	Ile	Asp	Phe	Leu	Tyr	Ala	Tyr	Lys	Leu	Ser
	50					55					60				
Lys	Asp	Ile	Leu	Gly	Asn	Ala	Ala	Ile	Val	Pro	Tyr	Ile	Ala	Gly	Leu
	65				70					75					80
Ser	Ile	Leu	Ser	Ala	Ile	Ser	Met	Glu	His	Cys	Leu	Ser	Val	Trp	Gln
			85						90					95	
Met	Arg	Tyr	His	Cys	His	Tyr	Pro	Arg	Asn	Met	Ser	Ala	Ile	Leu	Cys
			100					105					110		
Ala	Leu	Ile	Trp	Val	Leu	Ser	Phe	Leu	Met	Asp	Ile	Leu	Asp	Trp	Phe
		115					120					125			
Phe	Ser	Gly	Phe	Leu	Gly	Glu	Thr	His	His	His	Leu	Trp	Lys	Asn	Ile
	130					135					140				
Asp	Phe	Ile	Ile	Thr	Ala	Phe	Leu	Ile	Phe	Leu	Phe	Met	Leu	Leu	Ser
	145				150					155					160
Gly	Ser	Ser	Leu	Ala	Leu	Leu	Leu	Arg	Ile	Leu	Tyr	Gly	Phe	Lys	Arg
			165					170					175		
Lys	Pro	Leu	Ser	Arg	Leu	Tyr	Ile	Ile	Ile	Ser	Leu	Thr	Val	Met	Val
		180					185						190		
Tyr	Leu	Ile	Leu	Gly	Leu	Pro	Leu	Gly	Leu	Ser	Phe	Phe	Leu	Leu	
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<210> 102

<211> 1389

<212> DNA

<213> Mus musculus

<400> 102

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gatccaaaca tctcatccca caacacagaa tctactccac tgaatgaaac tgggtcatcca 120

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aacttcagta caatactcac gctgtccttt ctggtcctcg tcaactgtcct cgtggaactg 180
gcaggaaaca ccattgtact ctggctcctg ggattccgca tgcacaggaa agccatctca 240
gtctatgtcc tcaatctggc tctggcagac tccttcttct gctgccattt cattgactct 300
ctgctatgga tcaactgactt catctatacc cataaattaa gcaaagatat cttacgcaat 360
gcagcaattg ttccctatat cgcaagactg agcgtcctca gtgctattag aatggagcac 420
ttactgttta tattgtggcc aatctggtac cactgccacc acccaagaaa catatcagct 480
atcctatgtg ccctaactctg ggttctgttc tttctcatgg gcatccttga ttggttcttc 540
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gcatttctga tttttttaat gctgctttct gggtcactc tggccctact gctgaggata 660
ctttgtgggt ccaggaggaa actcctgtcc aggtgtgatg ttaccatctc tctcacagt 720
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aagcattggt cctctaaac tattctaaag aggacctgg agaacattcc tgaggaggat 960
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ccttttagca 1389

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<210> 103

<211> 206

<212> PRT

<213> Mus musculus

<400> 103

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Ile Tyr Thr His Lys Leu Ser Lys Val Tyr Leu Thr Gln Cys Ser Asn
             20             25             30
Phe Pro Tyr Ile Ala Arg Leu Ser Val Leu Ser Ala Ile Arg Met Glu
             35             40             45
His Leu Leu Phe Ile Leu Trp Pro Ile Trp Tyr His Cys His His Pro
             50             55             60
Arg Asn Ile Ser Ala Ile Leu Cys Ala Leu Ile Trp Val Leu Phe Phe
             65             70             75             80
Leu Met Gly Ile Leu Asp Trp Phe Phe Leu Gly Phe Leu Gly Glu Thr
             85             90             95
His His His Leu Trp Lys Asn Ile Asp Phe Ile Ile Pro Ala Phe Leu
             100            105            110
Ile Phe Leu Met Leu Leu Ser Gly Ser Thr Leu Ala Leu Leu Leu Arg
             115            120            125
Ile Leu Cys Gly Ser Arg Arg Lys Leu Leu Ser Arg Leu Tyr Val Thr
             130            135            140
Ile Ser Leu Thr Val Met Val Tyr Leu Ile Cys Gly Met Pro Leu Gly
             145            150            155            160
Leu Tyr Leu Phe Leu Leu Tyr Trp Phe Gly Ile His Leu His Tyr Pro
             165            170            175
Ser Cys His Ile Tyr Gln Val Thr Ala Leu Leu Ser Tyr Val Asp Ser
             180            185            190
Ser Ala Asn His Ile Phe Tyr Phe Leu Val Gly Ser Phe Arg
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<210> 104  
 <211> 1420  
 <212> DNA  
 <213> Mus musculus

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 gagtgaattg tcatttccttc tgccatctta gcaatcccct ggccagggtga ctgacaggta 180  
 caacattgtc aactcaaggg aggakrtaaa tgyrtgtgat ccttaatcta gagcacagac 240  
 cagagtcaca tmtcaaccca gagttagggg tagaaytcag aatccattct tttgatgatg 300  
 aggaagtatc tttcccttaa tatgcctcaa caaaaccctg atatcatcat cttttctgtg 360  
 tcattttaag ccctggggag gtaaattgtga tgcttccctt tctggagtta ccaagggtggc 420  
 aggaaatgga tccaaccctg accatgaaaa aaggaaatcg ttcccatgtg aattaaagat 480  
 cctgagttat acacaggaag aatgatgcag actatagagt aaacacaagc tctaaatttg 540  
 aatccacagt ccagaattct taatcccatg tggatcatgt actttccttt tatttataaa 600  
 tcattttatt taataatgtt gacaagaata tctatattay rttatgattg ccagaagaag 660  
 ggtcagtggt aatgtgtctc aatatgggtc gtgttctcag ggacacaact ggaagatttg 720  
 tgagcatgga ttcaaccatc tcatcccaac acacaawatc tacacaactg aatgaaactg 780  
 stratcctaa ctgcagtcca atcctgacmc tgyccctcct ggccctcatc actgccctgg 840  
 tttgactggc agaaaacact attatactct gactcctggg attcccatg cacaggaaaag 900  
 ccatctcagt ctatatcctc aaccaggctc tggcagactc cttcttcctc tgctgtcact 960  
 tccttgactc tatgtacag atcattgact tctatggcat ctatggccat aaattaagca 1020  
 aagatatctt aggcaatgca gcaatcattc cctatatcac agggtgagc gtcctcagtg 1080  
 ctattagcac tgctgtctc tattgtggcc aatctggtac cattgccacc acccaagaaa 1140  
 catgtcaggt atcatatgtg cctaactctg ggttctgtcc tttctcatgg gcatccttga 1200  
 ttggttcttc tcaggattcc tgggtgagac tcattatcat ttgtgggaaa atgttgactt 1260  
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 ggaggaaaacc cctgtccagg ctgtatgtta ccatctctct cacagtgatg ggctacctca 1380  
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<210> 105  
 <211> 200  
 <212> PRT  
 <213> Mus musculus

<400> 105  
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 Leu Leu Leu Gly Phe Pro Met His Arg Lys Ala Ile Ser Val Tyr Ile  
 20 25 30  
 Leu Asn Gln Ala Leu Ala Asp Ser Phe Phe Leu Cys Cys His Phe Leu  
 35 40 45  
 Asp Ser Met Leu Gln Ile Ile Asp Phe Tyr Gly Ile Tyr Gly His Lys  
 50 55 60  
 Leu Ser Lys Asp Ile Leu Gly Asn Ala Ala Ile Ile Pro Tyr Ile Thr  
 65 70 75 80  
 Gly Leu Ser Val Leu Ser Ala Ile Ser Thr Asp Leu Ser Ile Leu Trp  
 85 90 95  
 Pro Ile Trp Tyr His Cys His His Pro Arg Asn Met Ser Gly Ile Ile  
 100 105 110  
 Cys Ala Leu Ile Trp Val Leu Ser Phe Leu Met Gly Ile Leu Asp Trp  
 115 120 125  
 Phe Phe Ser Gly Phe Leu Gly Glu Thr His Tyr His Leu Trp Glu Asn  
 130 135 140  
 Val Asp Phe Ile Ile Thr Ala Phe Phe Ile Val Cys Phe Ser Leu Gly  
 145 150 155 160

Leu Leu Met Arg Ile Leu Cys Gly Gly Ile Pro Leu Ser Arg Leu Tyr  
                           165                          170                          175  
 Val Thr Ile Ser Leu Thr Val Met Gly Tyr Leu Ile Cys Gly Leu Pro  
                           180                          185                          190  
 Leu Gly Leu Tyr Leu Ser Leu Leu  
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 <211> 730  
 <212> DNA  
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 cctgacacca ttctttctgg tctcatcac tgtactggg gaattggcag gggaacacca 180  
 ttatactctg gctcctggga ttctgcatga acaggaaagc aatctcagtt tatgtcctca 240  
 atctggctct ggcagactcc ttcttttctt ctgttgccat ttcattgact ctctgctaca 300  
 gaacattgac ttcatcaatg ccataaaatt aagcaaacat atcttaggaa atgcagcaat 360  
 cattccctat attgcagggc tgagcctcct cagtgtctatt agcatggagc actgcctgtt 420  
 tatattatgg ccaatctggg accactgcc aacatgtca gctatcatat gtgccctaata 480  
 ctgggttccg tcttttctca agggcatcct caatttggtt ttctcaggat tctgggtga 540  
 gactcatcat catttgtggg aaaatattga ctttattata actgcatttc tgattttttt 600  
 atttatgctt ctctgtgggt gcactttggc cctagagctg aggatactet gtggctccag 660  
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 ctgtggcctg 730

<210> 107  
 <211> 198  
 <212> PRT  
 <213> Mus musculus

<400> 107  
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                           20                          25                          30  
 Tyr Val Leu Asn Leu Ala Leu Ala Asp Ser Phe Val Phe Leu Cys Cys  
                           35                          40                          45  
 His Phe Ile Asp Ser Leu Leu Gln Asn Ile Asp Phe Ile Asn Ala His  
                           50                          55                          60  
 Lys Leu Ser Lys His Ile Leu Gly Asn Ala Ala Ile Ile Pro Tyr Ile  
   65                          70                          75                          80  
 Ala Gly Leu Ser Leu Leu Ser Ala Ile Ser Met Glu His Cys Leu Phe  
                           85                          90                          95  
 Ile Leu Trp Pro Ile Trp Tyr His Cys His His Met Ser Ala Ile Ile  
                           100                          105                          110  
 Cys Ala Leu Ile Trp Val Pro Ser Phe Leu Lys Gly Ile Leu Asn Leu  
                           115                          120                          125  
 Phe Phe Ser Gly Phe Leu Gly Glu Thr His His His Leu Trp Glu Asn  
                           130                          135                          140  
 Ile Asp Phe Ile Ile Thr Ala Phe Leu Ile Phe Leu Phe Met Leu Leu  
   145                          150                          155                          160  
 Cys Gly Cys Thr Leu Ala Leu Glu Leu Arg Ile Leu Cys Gly Ser Arg  
                           165                          170                          175  
 Lys Lys Pro Leu Ser Arg Leu Val Thr Ile Ser Leu Thr Ala Met Val

180  
Tyr Leu Ile Cys Gly Leu  
195

185

190

<210> 108  
<211> 847  
<212> DNA  
<213> Mus musculus

<400> 108  
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aaggatgatca aatatggcct gttttcctca gggacaccaa tgggtgattt gtttagcatg 180  
gatccaacca tctcatccca caacacagaa tcacaccact gaatgaacct ggcccatccc 240  
gactgcaatc caatcctggt totgtccttt ctggtcctca tcgctgtcct ggtggaactg 300  
gcaggaaaca ccattgttct ctggctcctg ggattccgca tgcacaggaa acccatctca 360  
gtctatgtcc tcaatctggc tctggcagac tctttcttcc tctgtgtcca ttctattgac 420  
tctctgttac aaatcattga ctacacctat gcccataaat taagcaaaga tatcttagac 480  
aatgcagcaa ttgttcctt tatcacaggg ctgagggtcc tcagtgtctat tagcatggag 540  
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gctatcctat gtgccctaata ctgggttctg tcttttctca tgtccatcct ggactagttc 660  
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actgcatttc tgattttttt atttatgctt ctcttttagt ccagtctggc cctactgcgg 780  
aggatcctcc tgtggctoca ggaggaaata cctgtccacg ctatatgtta tcatttctct 840  
cacagtg 847

<210> 109  
<211> 192  
<212> PRT  
<213> Mus musculus

<400> 109  
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20 25 30  
Tyr Val Leu Asn Leu Ala Leu Ala Asp Ser Phe Phe Leu Cys Cys His  
35 40 45  
Phe Ile Asp Ser Leu Leu Gln Ile Ile Asp Phe Thr Tyr Ala His Lys  
50 55 60  
Leu Ser Lys Asp Ile Leu Asp Asn Ala Ala Ile Val Pro Phe Ile Thr  
65 70 75 80  
Gly Leu Arg Val Leu Ser Ala Ile Ser Met Glu His Cys Leu Ser Val  
85 90 95  
Leu Trp Leu Ile Trp Tyr His Cys His His Leu Arg Asn Met Ser Ala  
100 105 110  
Ile Leu Cys Ala Leu Ile Trp Val Leu Ser Phe Leu Met Ser Ile Leu  
115 120 125  
Asp Phe Phe Ser Glu Phe Leu His Glu Thr His His His Leu Trp Glu  
130 135 140  
Asn Val Asp Phe Ile Ile Thr Ala Phe Leu Ile Phe Leu Phe Met Leu  
145 150 155 160  
Leu Phe Arg Ser Ser Leu Ala Leu Leu Arg Arg Ile Leu Cys Gly Ser  
165 170 175  
Arg Arg Lys Tyr Leu Ser Thr Leu Tyr Val Ile Ile Ser Leu Thr Val  
180 185 190